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# HISTORY OF MUSIC,

## THEORETICAL AND PRACTICAL.

### INTRODUCTION.

MUSIC is defined by Rousseau, "the art of combining sounds in a manner agreeable to the ear." This combination may be either simultaneous or successive: in the first case, it constitutes *harmony*; in the last, *melody*. But though the same sounds, or intervals of sound, which give pleasure when heard in succession, will not always produce the same effect in harmony; yet the principles which constitute the simpler and more perfect kinds of harmony, are almost, if not entirely, the same with those of melody. By *perfect harmony*, we do not here mean that plenitude, those complex modifications of harmonic sound, which are admired in practice; but that harmony which is called *perfect* by theoreticians and artists; that harmony which results from the coalescence of simultaneous sounds produced by vibrations in the proportions of thirds, fifths, and octaves, or their duplicates.

But this art becomes a *science*, which is not only extensive but profound, when geometry is called in to ascertain the principles from whence these happy modifications of sound result, and by which they are determined; the ratio of these sensations, whether mental or corporeal, with which they affect us. The ancient definitions of music are not proportioned in their extent to our present ideas of that art; but M. Rousseau betrays a temerity highly inconsistent with the philosophical character when from thence he infers, that their ideas were vague and undetermined. Every soul susceptible of refinement and delicacy in taste or sentiment, must be conscious that there is a music in action as well as in sound; and that the ideas of beauty and decorum, of harmony and symmetry, are, if we may use the expression, equally constituent of visible as of audible music. Those illustrious minds, whose comprehensive prospects in every science where taste and propriety prevail took in nature at a single glance, would behold with contempt and ridicule the narrow and microscopic views of which alone their successors in philosophy have discovered themselves capable. With these definitions, however, we are less concerned, as they bear no proportion to the ideas which are now entertained of music. Nor can we follow Rousseau, from whatever venerable sources his authority may be derived, in adopting his Egyptian etymology for the word *music*. The established derivation from *Musa* could only be questioned by a paradoxical genius. That music had been practised in Egypt before it was known as an art in Greece, is indeed a fact which cannot be questioned; but it does not thence follow that the Greeks had borrowed the name as well as the art from Egypt. If the art of music be so natural to man, that vocal melody is practised wherever articulate sounds are used, there can be little reason for deducing the idea of music from the whistling of winds through the reeds that grew on the river Nile. And indeed, when we reflect with how easy a transition we may pass from the accents of speaking to diatonic sounds; when we observe how early children adapt the language of their amusements to measure and melody, however rude; when we consider how early and universally these practices take place, there is no avoiding the conclusion, that the idea of music is connatural to man, and implied in the original principles of his constitution. We have already said, that the principles on which it is founded, and the rules by which it is conducted, constitute a science. The same

maxims, when applied to practice, form an art; hence its first and most capital division is into *speculative* and *practical* music.

*Speculative music* is, if we may be permitted to use the expression, the knowledge of the nature and use of those materials which compose it; or, in other words, of all the different relations between the high and low, between the harsh and the sweet, between the swift and the slow, between the strong and the weak, of which sounds are susceptible; relations which, comprehending all the possible combinations of music and sound, seem likewise to comprehend all the causes of the impressions which their succession can make upon the ear and upon the soul.

*Practical music* is the art of applying and reducing to practice, those principles which result from the theory of agreeable sounds, whether simultaneous or successive; or, in other words, to conduct and arrange sounds according to the proportions resulting from consonance, from duration and succession, in such a manner as to produce upon the ear the effect which the composer intends. This is the art which we call *composition*. With respect to the actual production of sounds by voices or instruments, which is called *execution*, this department is merely mechanical and operative; which, only presupposing the powers of founding the intervals true, of exactly proportioning their degrees of duration, of elevating or depressing sounds according to those gradations which are prescribed by the tone, and to the value required by the time, demands no other knowledge but a familiar acquaintance with the characters used in music, and a habit of expressing them with promptitude and facility.

Music is at present divided more simply into *melody* and *harmony*; for, since the introduction of harmony, the proportion between the length and shortness of sounds, or even that between the distance of returning cadences, are of less consequence amongst us. For it often happens in modern languages, that the verses assume their measures from the musical air, and almost entirely lose the small share of proportion and quantity which in themselves they possess.

By *melody*, the successions of sound are regulated in such a manner as to produce pleasing airs. *Harmony* consists in uniting to each of the sounds, in a regular succession, two or more different sounds, which simultaneously striking the ear soothe it by their concurrence.

It would seem that music was one of those arts which were first discovered; and that vocal was prior to instrumental music, if in the earliest ages there was any music which could be said to be purely instrumental. For it is more than probable, that music was originally formed to be the vehicle of poetry; and of consequence, though the voice might be supported and accompanied by instruments, yet music was never intended for instruments alone. See BARD, vol. ii. p. 717.

We are told by ancient authors, that all the laws, whether human or divine, exhortations to virtue, the knowledge of the characters and actions of gods and heroes, the lives and achievements of illustrious men, were written in verse, and sung publicly by a choir to the sound of instruments; and it appears from the Scriptures, that such from the earliest times was the custom among the Israelites. Nor was it possible to find means more efficacious for impressing on the mind of man the principles

of morals, and inspiring the love of virtue. Perhaps, however, this was not the result of a premeditated plan; but inspired by sublime sentiments and elevation of thought, which, in accents that were suited and proportioned to their celestial nature, endeavoured to find a language worthy of themselves, and expressive of their grandeur.

It merits attention, that the ancients were duly sensible of the value and importance of this divine art, not only as a symbol of that universal order and symmetry which prevails through the whole frame of material and intelligent nature, but as productive of the most momentous effects both in moral and political life. "Pythagoras, Archytas, Plato, and all ancient philosophers, held as indubitable, that the stars, and the revolutions of the heavens, could not have been made and subsist without accord and harmony." Plutarch de Musica, cap. 68.

And thus our old English poet Heywood:

The spheres chime music to their Maker's praise.  
In the world's first creation it begun,  
From the word, *Fiat*, spoke, and it was done,  
Was sound and sweetness, voice and symphony,  
Concord, consent, and heavenly harmony.  
The three great orders of the hierarchy,  
Servants unto the eternal majesty,  
In their degree of ternions hourly sing,  
Loud hallelujahs to the Almighty King.  
The seraphims, the cherubims, and thrones,  
Potentates, virtues, dominations,  
The principates, archangels, angels, all  
Resound his praise in accents musical.

*Hierarchy of the Blessed Angels.*

Plato and Aristotle, who disagreed almost in every other maxim of politics, are unanimous in their approbation of music, as an efficacious instrument in the formation of the public character and in conducting the state; and it was the general opinion, that, whilst the gymnastic exercises rendered the constitution robust and hardy, music humanised the character, and softened those habits of roughness and ferocity by which men might otherwise have degenerated into savages.

Since it cannot be denied that, with all its apparent anomalies and dissonances, the whole of the creation is founded upon the simplest and yet most admirable system of harmony; and that man, according to our present knowledge of things, is most favourably gifted by Providence, with regard to the *acumen* of senses, because these senses bring severally their results to reason, which is not the case with brutes, although they may boast more exquisite organs in themselves and separately; we ought to conclude that Music must be congenial to him, and that the enjoyment of it, in its natural or artificial state, is one of the finest endowments he has received from the Almighty in the curious and hardly-explicable construction of the organ of hearing. Centre of all sounds, either pleasing or disagreeable, shrill or deep, quick or slow, simple or harmonized with others, from the loud peals of thunder down to the slight note of the passing gnat; from the harsh gratings of the saw to the mellow vibrations of the Eolian lyre; from the modulated accent and heart-felt melody of the human voice, to the roughest roarings of the brute; the ear proves a miracle of composition to the keenest observer, the ablest anatomist, and the most impartial philosopher; and constitutes the first link in the ever-blessed chain of social enjoyments. It was under the vermeil canopy of the ear, in her discrete and tremulous cells, that the first warblings of infant love, the half-expressed murmurs of affection, the timid sighs of awakening passion, created the first and best harmony in the world. It was to the ear that the first words uttered between man and woman conveyed the first musical as well as rapturously-intellectual sounds. They vibrated upon the new-born fibres of the ambient air, whilst the instinctive choirs of birds in the woods,

harmonizing with the soft gurglings of the neighbouring brook and the rustlings of the forest-leaves, sang the epithalamium, the connubial hymn of our first parents; and then, O then, Music was born!

Music! O thou sweet soother of all woes!

The tongue of pleasure too—the sigh of love,  
When, infant still, he whispers in the grove;  
Or, bolder, walks as his bright taper glows  
On beauty's form—and eloquent bespeaks  
The time, the place, where, though reluctant, yet  
She yields, forgives, nor wishes to forget.—  
Daughter of heaven! whence with thy sister, Mirth,  
To bless mankind thou visited'st the earth!  
Thy pow'r unknown; that deeply-felt controul  
Of slend'rest tunes upon the strongest soul  
Of heroes—when they drown the groans, the shrieks,  
Of falling nations, rend the doleful air  
With bold triumphant peans—or so blithe  
Call to the tripping dance the village fair,  
Unmindful then of Time's all-mowing scythe.—  
Music! oh! what art thou?—

As long as Innocence continued her abode among the inhabitants of the earth, Music was their delight, and brought raptures to the heart from whose tranquil recesses it had sprung. No contentions disturbed the peaceful harmony of society, and friendship with love united to perpetuate happiness. Under this point of view, we must imagine that the golden age of mythology, if it ever existed, must have been the age of melody and song. But, even when corruption had degraded man below the level of the brute, it was still the province of music to recal him to his original state and pristine dignity. Then, under the pleasing garb of allegory, we are told that Orpheus bade the most ferocious beasts of the earth to crouch at his feet, and confess themselves subdued by the power of music in the influence of the vocal lyre. The air saw with astonishment huge stones and massy pillars obey the harmonious voice of Amphion at the foundation of Thebes. Listening with rapture to the lovely strains of Arion's lute, the dumb inhabitants of the waters danced around him, and saved his life; whilst the mystery of fire, in the beams of the rising sun, blazed upon the brazen statue of the Egyptian Memnon all the charms of harmony. Thus Mythology, in her instructive fables, has represented music pervading nature through the incomprehensible ministry of the elements, and animating the whole of the universe. The subterraneous regions themselves, and the grim inhabitants of Tartarus, were not insensible to the delights of melody; and, touched by the desolate husband of Eurydice, the lyre suspended for a few instants the torments of hell, and Pluto's implacable heart was softened to mercy. Thus benefited by the assistance of that daughter of heaven, for Harmony was supposed one of the first offsprings of Cælus, (Hesiod's Theog.) man listened to more distant consonances, to higher melodies; and fancied he had caught, with Scipio in his dream, the sounds of celestial music in the spheres. (Cicero's *Somnium Scipionis*.)

Though imaginary, these powerful allegories plainly demonstrate what an idea the ancients must have entertained of music. We find it praised every-where in their works. Wonders are mentioned; and, were we to believe what they traditionally received, and have related, not as fables, but facts, the mind and heart of man were but toys tossed up and down at pleasure by the almighty power of this heavenly art. Mirth or melancholy, cowardice or courage, love or hatred, jealousy or fear, hope or despair, fluttered about the tremulous wires of the lyre, issued from the harmonical apertures of the flute, ready to fly, to bless or distress, to wound or comfort, to wake or lull to sleep, the designated objects; and, according to the various modulations of the instrument, smiles or tears appeared instantaneously on the responsive features of the human face.

What



What a cause of regret for the lover of the art, that no vestiges can be traced of what ancient music really was; and that, in the rapid flood of ages, all records fit to beam a light on so interesting a subject have been entirely swept away. We have indeed treatises and works of the Greeks upon ancient music, but they are of no use; for the most learned professors of modern harmony cannot understand them. The tedious niceties of everlasting windings through the labyrinth of a disaffected diapason; the peculiar characters of their tetrachords, and the heavy cloud that sits upon the knowledge of their notation; may be set down as real causes of distress to the feelings of the musician, as well as to the curiosity of the antiquary.

In his introduction to the history of this heavenly art among the ancients, the learned and celebrated Dr. Burney says, with no less ingenuity than truth, "What the ancient music really was, it is not now easy to determine; but of this we are certain, that it was something with which mankind was extremely delighted. For not only the poets, but the historians and philosophers, of the best ages of Greece and Rome, are as diffuse in its praises as of those arts concerning which sufficient remains are come down to us to evince the truth of their panegyrics. And so great was the sensibility of the ancient Greeks, and so soft and refined their language, that they seem to have been to the rest of the world what the modern Italians are at present. For of the last, the language itself is music; and their ears are so refined, and so accustomed to sweet sounds, that they are rendered fastidious judges of music both by habit and education." The doctor might perhaps have added, by nature; for the harmonious glow of the delightful climate of Italy seems to have impressed upon the delicate nerves and corporeal frame of the inhabitants such an exquisite sensibility, that one might suppose that, transported young, or even born of Italian parents under the rougher climates of the north, the child would warble his infant tones with more sweetness and variety than the people among whom he might be accidentally placed. The doctor adds with great frankness, "The subject itself of ancient music is so dark, and writers upon it so discordant in their opinions, that I should have been glad to have waved all discussion about it; for, to say the truth, the study of ancient music is now become the business of an antiquary more than of a musician." (*Hist. of Music. Lond. 1776. vol. i. p. 3.*)

We entirely agree with this author in what we have quoted above. For, indeed, how can any one suppose that writers of taste and delicate feelings, like Aristotle, Pliny, Plutarch, &c. &c. who had a soul to seize upon, and attach itself to, whatever was good in the fine arts, could have been mistaken as to musical performances, and to its nearly supernatural influence upon the passions and affections of mankind? "Aristoxenus positively says, that, if music was introduced in banquets and festivities, it was principally because, wine being apt to excite agitation and tumult in the body and heart of those who drink it too freely, music possesses the power of bringing both to a calmer state by the arrangement and symmetry of its sounds." (*Plut. de Musicâ, chap. 67.*) Doubts have been raised as to the propriety and justness of the praises bestowed by Pliny and others upon the skill of the Greeks under Alexander, in the art of painting. The talents of an Apelles, a Zeuxis, a Parrhasius, have been brought into question, and their performances compared, by modern barbarians, to those of our best sign-painters. But what has been the victorious answer to these doubts: see the remains of their inimitable works in sculpture in general, and statuary in particular! See their Apollo, their Laocoon, their Venus de Medicis, and thousands of others! Can any man of sense suppose that the writers who had taste enough to feel, and genius to describe, these miracles of sculpture, could have been mistaken as to the sister art, painting? Pliny had seen the Laocoon, and the works of Apelles: he admires them all, and describes them with the same

enthusiasm. The conclusion is obvious. Both sculpture and painting deserved the same encomiums. Let us now apply this argument to music, and we must rest convinced that, as Burney says, music, among the ancients was "something with which mankind was extremely delighted."

But some one may ask, what might be the transports of admiration, or the sneer of disgust, the chill of deep impression, or the death-like apathy, of a Pericles or a Roscius, at hearing the overture of the *Clemenza di Tito* by Mozart, or of the *Anacreon* by Cherubini, as they are performed by the best orchestras in Europe, and their astonishing self-playing representative, that grand organ the Apollonicon? It is impossible to answer the question: we have no remaining data. Were the common and sudden jolts of the human voice in full declamation written down and called music? or the uniform *tenor* of the theatrical flute, as well as the oaten reed in the meadows of Enna, where Theocritus's goat-herds used to lull their brooks and their flocks to sleep, by the lengthened monotony of their pipes—were these confined notes the acme of melody in those times?—who can tell? Deaf to the sounds of antiquity, ignorant even of the pronunciation of ancient languages, but keen of hearing respecting modern music, we are not easily convinced that Greek and Roman harmonists were comparatively equal in taste and skill to our own. Yet, that never-failing standard, those delightful specimens of tuneful organs which nature has bountifully placed on every tree, in every bush, when the feathered choristers of spring, summer, and autumn, celebrate in full bands the rising of the sun, the type of their Creator; the notes of the nightingale, of the blackbird, of the red-breast, and of the thrush, are still the same, the unchanging patterns of genuine melody; and, if the cotemporaries of Tyrtæus, endowed with the keenest sensations of harmony, did, as we do, admire and praise the warblings of the grove, how could they listen to a system of music much inferior to our's? We must therefore conclude that, though an impenetrable veil has been dropped by the hand of time between ancient music and our ears, the greatest part of what we read concerning it in contemporary writers, does not deviate much from reality and truth.

Besides, had not this art attained a great degree of perfection, as well as painting and statuary, what could have induced the historians to be so careful, so respectfully minute, in preserving the names of those who had either invented or performed in the different musical modes. In his amusing treatise on music, Plutarch alone mentions about seventy worthies of this kind, who were, mostly, both poets and musicians; for poetry and music were seldom separated, and these two sister muses used to go hand in hand to the banquetting-hall, or walk at the head of conflicting armies.

The most barbarous tribes of savages had at all times their musical entertainments; and does not the fulling negro solace his slavish hours by what to him is music, although to us it appears but a sad and constant iteration of the same doleful sounds? The "rans des vaches," whose modulation, simple, and nearly uniform like nature, expresses in a few bars the trickling down of small streams of water among the stupendous rocks and delightful valleys of Switzerland, united to the quicker movement of a pastoral dance in the bosom of the Alps; this ancient specimen of rude melody, as old perhaps as the nation of the Allobroges, (who long preserved their freedom, and kept aloof the claws of the Roman eagle,) has been handed down to us by tradition; and every one knows that these genuine and national sounds have the magic power of calling forth tears of regretful memory from the eyes of the Swiss peasant, when he hears them in any country ever so distant from the rugged rocks and snowy ridges where he was born. So much for the power of music, even in its uncultivated state, upon the feelings of man.



It has been ingeniously fabled, that Apollo was the god of music, because he had invented it: this allegory alighted pleasantly upon the mind of those who first discovered a singular, but yet inexplicable, similarity between the heptachord lyre and the seven planets supposed to "keep their choral duties around the sun." The distances between the notes in the diapason and the situation of the planets respectively to the sun were eagerly calculated, and celestial harmony was placed upon the same level with terrestrial melody. In more modern times, the three principal colours of the sun-beam with their four accidental and prismatic intermediate tints, were also found to bear analogy to the heptachord; and again the melody of sounds was thought connected with the harmony of the universal creation. But, as the sun is equally the author of colours, since no colours exist without light, and as the sun was supposed to be the key-note of astronomical harmony, we must draw this natural conclusion, that it was not without some allowable ground that Apollo laid claim to the authorship of harmony.

Another god also presents himself as a candidate for the honour of having invented the vocal shell. Whether the founding body of his instrument was the skull of a bull, or the convex shelter of the land-tortoise, we leave to antiquaries to decide; but ancient monuments represent him with a lyre composed of either. The question with us at present might be, why the cunning youth, who, by the charms of his performance upon the eloquent wires, lulled asleep the hundred-eyed keeper of the beloved of Jove, the Egyptian Io, is pronounced the first musical instrument maker in mythological lore. The reason being obvious, the answer is easy: Ought not the messenger of the gods to have been supernaturally endowed with the most persuasive eloquence? and was not music supposed to have been the most powerful engine to soften the mind, and captivate the heart? Montaigne, in his far-renowned but seldom-read *Essays*, mentions, that his father, anxious to harmonize his mind, and calm the natural irritability of infancy, ordered that he never should be awakened from his morning slumbers but by the softest melody of musical instruments. Ancient and even modern facts, unsupported by the beautiful imagery of Greek and Roman fancy, coincide to prove the great credit in which music was at all times held. And to conclude with a transcendent proof: whenever man, in a grateful sense towards the Divinity, or under the impression of fear, wanted to address his Creator, he had recourse to music. Hence the hymns of Orpheus, of Homer, and of thousands of poets before them; hence the constant attendance of skilful musicians at the altars of Delphi, of Ephesus, and of the Capitol; hence the introduction of music in Christian churches from the earliest period to this very day; so that our prayers to the Deity seem as it were to obtain a passport to heaven from the insinuating melody of this celestial art.

#### PROGRESSIVE HISTORY OF MUSIC.

THE antiquity of music, as a science, is so well known, that it disdains the aid of formal proof. Among the ancients, the priest, the prophet, the poet, and the musician, were frequently united in the same person, and from the earliest ages music had admission in the religious ceremonies, public festivals, military establishments, funeral rites, and private amusements, of mankind.

It appears both by sacred and profane history, that music was one of the first arts known to mankind. Musical instruments were in use before the flood; for Jubal is said to be *the father of all such as handle the harp and organ*. Gen. iv. 21. We have the authority of Moses, and the testimony of the most ancient and respectable historians, to prove that Egypt was one of the first countries in the known world which cultivated the arts and sciences. The wonderful remains of the pyramids of Egypt show, that architecture was known to the Egyp-

tians, and brought by them to the highest degree of magnificence. They recorded all new inventions upon columns or pillars; and upon some of their most ancient obelisks musical instruments are represented. In the Campus Martius at Rome, there is at this time an obelisk, supposed to have been erected at ancient Thebes, by Sesoftris, near four hundred years before the Trojan war; among other hieroglyphics, is represented a musical instrument constructed to take two strings, with a neck to it. Of this curious instrument we shall give a figure, with a more particular description, under the head **MUSICAL INSTRUMENTS**.

To endeavour to trace the science of music to a more remote source than the history of Egypt, would be without effect. The Greeks unanimously acknowledge, that most of the ancient musical instruments were of their inventing. Music was in such great estimation among the people of this country, that through this medium their children were taught letters; the songs were settled by law; and a certain species of music was established by government, exclusive of all others. They divided the inhabitants of their country into casts or tribes, confining each profession to one family; and, as music was for many ages confined to the priesthood, the Hebrews, who adopted many of their customs, made the offices of priests, levites, and musicians, hereditary in the tribe of Levi. The Lacedemonians likewise agreed with the Egyptians, and confined the profession of music to one family; and their priests, like those of Egypt, were taught medicine and music, and initiated into religious mysteries. After the Egyptians became subject to the Persians, the arts and sciences lay dormant for a long time; but under the Ptolomies, particularly the seventh king of that name, music, together with the other arts of Greece, was received in Egypt, and greatly encouraged at the court of Alexandria, and continued to be cultivated till the final dissolution of the empire.

As to vocal music, it being the voice of nature, there is no doubt but it is coeval with mankind. Who gave the birds that power of song, with which the woods resound? Who taught the nightingale the various notes of song? Nature! that mistress of music, who taught from the beginning all who have the power of melodious sounds.

If we peruse the Holy Bible, we shall be convinced from the highest authority, that music from the earliest ages was in general use. But, though Jubal is mentioned so soon in the Pentateuch, yet he could have lived but a short time before the deluge, A. M. 1656; consequently the world must have been peopled many centuries before the invention took place. And with respect to the instrument called an *organ* in the English version of this passage, it must not be imagined that such a noble and complicated machine is there implied as the present instrument of that name. In the Hebrew it is called *huggah*, which, say the commentators, was a kind of syrinx, or fistula. The Septuagint, instead of *harp and organ*, has psalter and cithara. Hence it appears that the translators, ancient and modern, of all parts of the world, not knowing what were the real forms and properties of the Hebrew instruments, have given to them the names of such as were of the most common use in their own countries.

No mention, however, is made in the scriptures of the practice of music, till more than six hundred years after the deluge. But in Genesis xxxi. the 26th and 27th verses, about 1739 years before Christ, according to the Hebrew chronology, both vocal and instrumental music are spoken of as things in common use. "And Laban said to Jacob, What hast thou done, that thou hast stolen away unawares to me, and carried away my daughters, as captives taken with the sword? Wherefore didst thou flee away secretly, and steal away from me? and didst not tell me, that I might have sent thee away with mirth and with songs, with tabret and with harp?" Laban was a Syrian,



Syrian, and brother to Rebecca, Isaac's wife; so that the tabret and the harp should be ranked among Assyrian instruments.

After this time the sacred text furnishes no musical incident till the year 1491 before Christ, when we have the first hymn, or psalm, to the Supreme Being, upon record. It contains the pious effusions of Moses, after the passage of the Red Sea, at the head of the whole people of Israel, just escaped from bondage. *Then sang Moses and the children of Israel this song unto the Lord, and spake, saying, I will sing unto the Lord, for he hath triumphed gloriously, &c.* Exod. xv. Moses is seconded on this occasion by Miriam, the prophetess, and sister of Aaron, who took a timbrel in her hand, ver. 20; and all the women went out after her with timbrels and with dances. And Miriam answered them, *Sing ye to the Lord, &c.*

Here is an early instance of women being permitted to bear a part in the performance of religious rites; as well as of vocal music being accompanied by instrumental, and by dancing.

On some occasions, one of the choirs sung a single verse of a hymn, which was answered by the other by a verse in some respect correspondent to the first. The 135th Psalm is obviously adapted to three choirs; the high priest with the house of Aaron constituting the first; the Levites, the second; and the congregation, the third; each having its distinct part, and all at stated intervals uniting in full chorus. From an analysis of this psalm it might easily be shown, that the Hebrew hymn is a composition not less regular than the Grecian ode. One cannot but observe too, that it was from the Jewish that the Christian church derived the custom of singing in alternate chorus. Pliny (lib. x. epist. 97.) observes of the primitive Christians, that "they repeat alternate verses to Christ, as to a god." And the remains of this ancient custom are yet evident in the alternate or responsive parts of the liturgy of the established church. See Bingham's *Antiq.* xiv. 1.

St. Stephen tells us, (Acts vii. 21, 22.) that Moses, having been educated by Pharaoh's daughter "as her own son, was learned in all the wisdom of the Egyptians." And Clemens Alexandrinus particularizes his acquirements, by affirming that "he was instructed in his maturer age by the Egyptians in all liberal sciences, as arithmetic, geometry, rhythm, harmony, but, above all, medicine and music." However, in the infancy of states, a nation has but little leisure for cultivating music any otherwise than as it is connected with religious rites and the military art. Accordingly we find no other musical instrument mentioned during the administration of the great Hebrew legislator, than trumpets, except the timbrel used by Miriam. Moses (Num. x. 2.) is ordered, by divine command, to make two trumpets of silver, of a whole piece, for assembling together the people, and for journeying the camps. And in the eight following verses all the signals to be sounded by one and by two trumpets are regulated. But these instruments seem to differ from that of the jubilee in nothing but the materials of which they were made; as the Hebrew text, and the several versions, agree in calling all by one name.

The feast of trumpets instituted by Moses, Numb. xxix. 1. in the month of September, is imagined to have been the celebration of the harvest-home. *In the seventh month, on the first day of the month, ye shall have a holy convocation; ye shall do no servile work; it is a day of blowing of trumpets unto you.* The rigid observance of the sabbath upon every seventh day, rendered seven a sacred number among the Hebrews. Hence, not only the seventh day, but the seventh week, the seventh month, the seventh year, and the seven times seventh year, were kept holy: *And on the fiftieth year thou shalt cause the trumpet of the jubilee to sound throughout the land.* Lev. xxv. 9.

No further mention is made of music, till the song of Deborah and Barak, (Judges v.) which seems to have been sung in dialogue, and wholly without instruments.

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It was about fifty years after this period, 1143 years before Christ, that the unfortunate daughter of Jephtha, upon hearing of her father's victory over the Ammonites, went out to meet him with timbrels and with dances. Judges xi. 34. From this time till Saul was chosen king, B. C. 1095. the sacred text is wholly silent about every species of music, except that of the trumpet in military expeditions.

But here an incident occurs, which seems to merit particular attention. It appears from many passages in scripture, that music was as nearly allied to prophecy as to poetry. When Samuel, after secretly anointing Saul king, instructs the new monarch in the measures he is to pursue for establishing himself on the throne, he says, *And it shall come to pass, when thou art come to the city, (Bethel,) that thou shalt meet a company of prophets coming down from the high place, with a psaltery and tabret, and a pipe, and a harp before them; and they shall prophesy. And the spirit of the Lord will come upon thee, and thou shalt prophesy with them.* 1 Sam. x. 5, 6.

The examples in scripture of this union of music and prophecy are numerous. "Moreover David, and the captains of the host, separated to the service of the sons of Asaph, and of Heman, and of Jeduthun, who should prophesy with harps, with psalters, and with cymbals. Of the sons of Asaph, four, who prophesied according to the order of the king. Of Jeduthun, six, who prophesied with a harp, to give thanks, and to praise the Lord. And of the sons of Heman, the king's seer, in the word of God, fourteen, to lift up the horn."

These prophecies are now, however, understood to mean, not the foretelling of future events, but merely celebrating the praises of God with music and song, under the influence of divine inspiration: but we cannot permit ourselves to doubt that events were sometimes foretold during these inspired songs. The most striking example of the custom practised by the prophets, of tranquillizing their minds, and exciting in themselves divine inspiration, by means of music, is in the Second Book of Kings. The three sovereigns of Israel, Judah, and Edom, marching with their armies through a wilderness, were all upon the point of being destroyed by thirst, as there was no water to be found in their passage, either for man or beast: "And the king of Israel said, Alas! that the Lord hath called these three kings together, to deliver them into the hand of Moab. But Jehoshaphat said, Is there not here a prophet of the Lord, that we may enquire of the Lord by him? And one of the king of Israel's servants answered and said, Here is Elisha, the son of Shaphat. So the king of Israel and Jehoshaphat, and the king of Edom, went down to him. And Elisha said, *Bring me a minstrel.* And it came to pass, when the minstrel played, that the hand of the Lord came upon him, and he said, Thus saith the Lord, Make this valley full of ditches," &c. 2 Kings iii. 11—15.

The royal psalmist, who was possessed of the spirit of prophecy, cultivated music early in life, and his psalms give ample testimony of his poetical abilities. He used to console himself with his harp or lyre, when his soul was in heaviness, and to sing the praises of the Lord. He was first sent for by Saul, who had heard of his skill in music, to administer relief to him by the power of his harp, when he was afflicted with an evil spirit: *And it came to pass, when the evil spirit from God was upon Saul, that David took a harp and played; so Saul was refreshed, and was well, and the evil spirit departed from him.* 1 Sam. xvi. 23. When David became king, we find him giving the greatest encouragement to this sacred art; his uniform attachment to the study and practice of it, and the great number of performers he kept for the purpose of attending religious ceremonies, extended its influence, and was the means of its being held in the highest estimation. In the service of the ark, he appointed four thousand of the Levites to praise the Lord with instruments. 1 Chron. xxiii. When he removed the ark from the house of



Obed-edom, he gathered all Israel together, to bring up the ark of the Lord unto the place which he had prepared for it: "And he spake to the chief of the Levites to appoint their brethren to be the singers with instruments of music, psalteries and harps and cymbals, sounding by lifting up the voice with joy. And the priests did blow with the trumpets before the ark of God. And David was clothed with a robe of fine linen; and all the Levites that bare the ark, and the singers, and Chenaniah the master of the song, gave thanks unto the Lord." 1 Chron. xv. xvi.

If we believe Josephus, "Solomon caused two hundred thousand trumpets to be made for the service of the dedication of the temple, besides four hundred thousand musical instruments, as harps, psalteries, and the like, which were made of a mixed metal, between gold and silver, to accompany the voices." *Josephus*, book viii. ch. 1. As the above numbers appear to surpass every idea of measure and of calculation, Mr. Eastcott (from whose *Sketches* much of this section is extracted) adds the following remarks in his Supplement. First, we should recollect, that God blessed Solomon not only with wisdom, but riches also, surpassing every monarch before or after him. The influx of gold into his dominions was so great, (2 Chron. ix. 13.) that silver was reckoned of no value during his reign. (1 Kings x. 21.) And, as every estimable object receives its value according to its plenty or scarcity, in a reign like Solomon's, articles which at other times are universally esteemed are then regarded as nought. To gratify the wish and intoxicate the eye, were the principles which pervaded his system: his treasures, magazines, &c. were objects more for public exhibition than utility; and were constantly increasing by the grand tributes daily presented to him by the admiring princes of the East, who, with the queen of Sheba, came to hear his wisdom, and view the magnificence of the temple, and his palaces, and the profusion, but beautiful order, of his household, treasury, and magazines; among which the magazine which contained his musical instruments we have reason to think made a very considerable figure. It should be observed also, that the Levites, who were all musicians, were in number 38,000; and that scholars, very numerous, must have been always in training to succeed them when (at fifty years of age) they were dismissed. And it is presumed, moreover, that a reserve of instruments, in perfect order, was always ready at hand, for the particular use of the sabbath and holidays; and, although stringed instruments are always liable to be out of order, yet they were not permitted to be repaired, or even a string put on or mended, on those days, as all manual labour is then strictly forbidden by law.

Josephus remarks that these instruments "were made of a composition between gold and silver." But he was too well acquainted with scripture to have inserted such a mistake. I should rather suppose (says Mr. Eastcott) an oversight in transcribing our author, which we may easily correct, by supposing he wrote, that "the strings or wires of these instruments, were made of a composition between gold and silver;" which, when compounded and rendered elastic, produced sounds the most melodious for accompanying the voice; or probably these instruments were inlaid or ornamented with a metal of this kind.

The reign of Solomon, so long, so pacific, and so glorious to the Hebrews, may be regarded as the Augustan age of that people; whose prosperity, during this period, not only enabled them to cultivate arts and sciences among themselves, but stimulated foreigners to visit and assist them. And, as we find that the Romans, during the time of Augustus and his successors, were indebted to the Greeks for a great part of their knowledge in the polite arts, so the Hebrews, under Solomon's government, had assistance from Egypt and from Tyre. Riches and renown never fail to attract talents into a country from neighbouring kingdoms. As to music and poetry, which were put upon so respectable a footing in the former

reign, they seem to have had their share of attention in this, particularly in the service of the temple.

It is the opinion of many expounders and commentators of the sacred writings, that Solomon was author of some of the Psalms that are attributed to David. Of this we are certain, that he was no less fond of poetry than his father. In the first of Kings, iv. and xxv. we are told that *he spake three thousand proverbs; and his songs were a thousand and five*. But whether, like the royal psalmist, he was a practical musician, does not appear in the records of his reign. However, in Ecclesiastes, ii. 8. we find music mentioned by this voluptuous prince among the vain luxuries and vexations of spirit, with which he found himself fatiated: "*I gat me men-singers and women-singers, and the delights of the sons of men, as musical instruments, and that of all sorts*:" which is all that can be gathered on the subject of music during this splendid reign.

A century passed from the dedication of the temple, without the mention of any thing remarkable in Scripture concerning the music of the Hebrews, except the passage already cited, where Eliha calls for a minstrel to awaken inspiration, previous to his prophesying.

In the year 896 B.C. the singers are said to have contributed greatly towards obtaining a singular advantage in favour of Jehoshaphat, over the Ammonites and Moabites. The musicians, following the camp in the same order as they served in the temple, marched as a vanguard in the field with their instruments: "And the Levites of the children of the Kohathites, and the children of the Korahites, stood up to praise the Lord God of Israel with a loud voice on high. And, when Jehoshaphat had consulted with the people, *he appointed singers unto the Lord*, and that should praise the beauty of holiness as they went out before the army, and to say, Praise the Lord, for his mercy endureth for ever. And, *when they began to sing, and to praise*, the Lord set ambushments against the children of Ammon, Moab, and Mount Seir, which were come against Judah, and they were smitten." 2 Chron. xx. 19-22.

The Hebrews frequently attributed their success in battle to the animation given the troops by the trumpets, which were always blown by priests and levites, whom the people highly revered, and regarded as inspired persons. It was, in like manner, the part of the ancient Gallic, German, and British, druids, who were not only priests, but musicians, to animate their countrymen to the fight.

Thus far we have only had to speak of the cultivation and improvement of music among the Hebrews; we have little more to add, except what will indicate its neglect and decline. But few memorials remain concerning it, from the victory obtained by Abijah, till the captivity and destruction of Jerusalem and the temple, by the Babylonians, in the reign of Jehoiakim. Before this period, music, and other sacred rites, had been frequently much corrupted, during the wars, and by intercourse with foreign nations; and, at every attempt to restore them to their former purity and splendour, we find the number of those employed in the service of the temple diminished, and their efforts more feeble and ineffectual. At the restoration of the royal family, after the crown had been usurped by Athaliah, we are told that "*the princes and the trumpets stood by the king; and all the people of the land rejoiced, and sounded with trumpets; also the singers with instruments of music, and such as taught to sing praise*. And Jehoiada, during the minority of Joash, *appointed the offices with rejoicing, as it was ordained by David*. B.C. 878. And in this reign we find that the *singers, the sons of Asaph*, were restored to their places. 2 Chron. xxiii. 13-18.

These continued, however, but a short time in the minority, before they were driven out, and the king and people became proselytes to another form of worship. (2 Chron. xxiv. 18.) But, after various revolutions both in religion and government, a powerful attempt was made, during the reign of Hezekiah, about 726 years B.C. to restore



restore the temple to all its ancient splendour. *And he set the Levites in the house of the Lord with cymbals, with psalteries, and with harps, according to the commandment of David. And the Levites stood with the instruments of David, and the priests with the trumpets. But the priests were too few to perform all the ceremonies formerly solemnized in the temple. However, there was now great joy in Jerusalem; for since the time of Solomon there was not the like in Jerusalem.* 2 Chron. xxix. xxx.

But this happy period was of short continuance; new schisms and new misfortunes soon put an end to it. And in the year 606 B. C. the Hebrew nation was subdued; the temple plundered and destroyed; and, soon after, both king and people were, by Nebuchadnezzar, sent captives to Babylon. During the seventy years captivity, it is natural to suppose that the Hebrews were denied the celebration of their religious rites; nor could they have much time or inclination for domestic amusements or festivity; so that music, the child of leisure and happiness, and the parent of innocent pleasure, must have been neglected, and shut out of their houses, as an unwelcome guest. The idea of every thing that awakened recollection of former felicity, must have been painful in a state of slavery. *By the waters of Babylon we sat down and wept, when we remembered thee, O Sion. As for our harps, we hanged them up upon the trees that are therein. For they that led us away captives required of us then a song, and melody in our heaviness: Sing us one of the songs of Sion. How shall we sing the Lord's song in a strange land? If I forget thee, O Jerusalem, let my right hand forget her cunning.* Psalm cxxxvii. These are the natural sentiments and feelings of a people, but lately fallen from a state of prosperity and happiness into that of bondage and misery.

All that has been hitherto collected relative to the music of the Hebrews, only shows that it was in general use among them, from the time of their quitting Egypt, till they ceased to be a nation; but what kind of music it was with which they were so much delighted, no means are now left to determine. That they had their first music and instruments, whatever they were, from the Egyptians, appears to admit of no doubt; but these seemed to have remained in a very rude state till the reigns of David and Solomon; and even then, perhaps, they were more improved in quantity than quality; for the great number of Levites, of singing-men and singing-women, as well as of trumpets, shawms, cornets, sacbuts, cymbals, and timbrels, could only augment the noisy cry of joy, or the clamour of petition.

However, we have no authentic account of any nation, except the Egyptians, where music had been cultivated so early as the days of David and Solomon, the brightest period of the Jewish history, the Greeks at that time having hardly invented their rudest instruments: for Homer and Hesiod, the refiners, if not the inventors, of Greek poetry; and Orpheus, Musæus, and Linus, to whom they attribute the invention of their music and instruments; all flourished, according to sir Isaac Newton, after these Hebrew monarchs.

With respect to the modern Jewish music, (says Dr. Burney,) we have been informed by a Hebrew high-priest, that all instrumental and even vocal performances have been banished the synagogue ever since the destruction of Jerusalem; that the little singing now used there is an innovation, and a modern license; for the Jews, from a passage in one of the prophets, think it unlawful, or at least unfit, to sing or rejoice before the coming of the Messiah, till when they are bound to mourn and repent in silence. But the only Jews now on the globe, who have a regular musical establishment in their synagogues, are the Germans, who sing in parts; and these preserve some old melodies, or species of chants, which are thought to be very ancient. And Padre Martini has inserted, from the *Estro-Poetico-Armonico* of Marcello, 1724, and from an inedited manuscript by the cavaglier Ercole Bottrigari,

called *Il Trimerone de Fondamenti Armonici*, 1599, a great number of such Hebrew chants as were sung in the synagogues of different parts of Europe, at the time when these works were composed. But, as no two Jewish congregations sing these chants alike, if tradition has been faithful in handing them down from the ancient Hebrews to any one synagogue, who shall determine to which such permanence can be attributed?

Among the GREEKS, the passion for arts and sciences was greater than that of most other nations, for most of their divinities were regarded as inventors of music. Almost all the ancient philosophers wrote treatises on music, especially the disciples of Pythagoras, Plato, and Aristotle. The first poets and musicians of Greece, sung their works in great cities, and in the palaces of princes, and were looked upon as inspired persons; they gained the wonder and possessed the affections of the people, till by degrees they became numerous; and, the art being considered of easy acquisition, their reputation sunk in the public opinion. Scarcely any kind of work was performed by the people of this country without music, and every profession had in use its peculiar songs.

As for Pythagoras, posterity has been very liberal to him, in bestowing upon him all such inventions as others had neglected to claim, particularly in music; for there is scarcely any part of it, as a science, with which he has not been invested by his generous followers. Thus, musical ratios have been assigned to him, with the method of determining the gravity or acuteness of sounds by the greater or less degree of velocity in the vibrations of strings; the addition of an eighth string to the lyre, (Pliny, lib. ii. cap. 2.) the harmony of the spheres, (Plato;) and the Greek musical notation, (Boethius.) His right, indeed, to some of these discoveries, has been disputed by several authors, who have given them to others with as little reason, perhaps, as they had been before bestowed upon him. But there is one discovery, relative to music, that has, at all times, been unanimously assigned to him, which, however, appears to us extremely doubtful, not only whether it was made by him, but whether, in the manner it is related, it was ever made by any one. We are told by Nicomachus, Gaudentius, Jamblichus, Macrobius, and all their commentators, "that Pythagoras, one day meditating on the want of some rule to guide the ear, analogous to what had been used to help the other senses, chanced to pass by a blacksmith's shop; and, observing that the hammers, which were four in number, sounded very harmoniously, he had them weighed, and found them to be in the proportion of 6, 8, 9, and 12. Upon this he suspended four strings, of equal length and thickness, &c. fastened weights, in the above-mentioned proportions, to each of them respectively, and found that they gave the same sounds that the hammers had done; viz. the fourth, fifth, and octave, to the gravest tone; which last interval did not make part of the musical system before; for the Greeks had gone no farther than the heptachord, or seven strings, till that time." This is the substance of the account, as it has been abridged by Mr. Stillingfleet, who points out many incredible circumstances with respect to the story in general, and denies that the weights 6, 8, 9, 12, would give the intervals pretended; but seems not to have seen the least difficulty in the fact, relative to different hammers producing different sounds upon the same anvil. The frontispiece to M. Marpurge's *History of Music*, represents the Samian sage in the act of weighing the hammers.

But, though both hammers and anvil have been swallowed by ancients and moderns, and have passed through them from one to another, with an osrich-like digestion, upon examination and experiment it appears, that hammers of different size and weight will no more produce different tones upon the same anvil, than bows or clappers of different sizes will from the same string or bell. Indeed, both the hammers and anvils of antiquity must



have been of a construction very different from those of our degenerate days, if they produced *any tones* that were strictly musical. Of the millions of well-organized mortals who have passed by blacksmiths' shops since the time of Pythagoras, we believe no one was ever detained by a *single note*, much less by an harmonious *concord*, from those Vulcanian instruments. A different kind of noise, indeed, will be produced by hammers of different weights and sizes; but it seems not to be in the power of the most subtle ear to discover the least imaginable difference with respect to gravity or acuteness. But, though *different noises* may be produced from different bodies, in proportion to their size and solidity, and every room, chair, and table, in a house, has a particular tone, yet these noises can never be ascertained like musical notes, which depend upon reiterated and regular *vibrations of the aliquot parts of a string*, or other elastic body; and, in wind-instruments, upon the undulation of the air conveyed into a tube.

The long belief of this story proves that philosophers themselves have sometimes taken facts upon trust, without verifying them by experiment; and, as the tone of the hammers was asserted without proof, so was the effect of their different weights fastened to strings. This Galileo discovered. The numbers 6, 8, 9, 12, applied to different lengths of strings, would, indeed, give the intervals mentioned: but it is proved, that, to produce those intervals by the *tension* of different weights, the weights must be the squares of those numbers; that is, 36, 64, 81, 144. It is astonishing how the blunder had been echoed from author to author, without experiment, till the time of Galileo. And Bontempi, in trying the power of weights upon strings in the Pythagoric proportions of 6, 8, 9, 12, found, that instead of giving the 4th, 5th, and 3th, of the gravest tone, they produced only the minor 3d, major 3d, and tritonus; so that the whole account falls to the ground. But, though modern incredulity and experiment have robbed Pythagoras of the glory of discovering musical ratios by *accident*, he has been allowed the superior merit of arriving at them by meditation and design. At least the invention of the harmonical canon, or monochord, has been ascribed to him both by ancient and modern writers.

The musical speculators of Greece arranged themselves into a great number of sects, the chief of whom were the Pythagoreans and the Aristoxenians.

Pythagoras supposed the air to be the *vehicle* of sound, and the agitation of that element, occasioned by a similar agitation in the parts of the sounding body, to be the *cause* of it. The vibrations of a string or other sonorous body, being communicated to the air, affected the auditory nerves with the sensation of sound; and this sound, he argued, was acute or grave in proportion as the vibrations were quick or slow. He discovered by experiment, that, of two strings equal in every thing but length, the shorter made the quicker vibrations, and emitted the acuter sound: in other words, that the number of vibrations made in the same time, by two strings of different lengths, was inversely as those lengths; that is, the greater the length, the smaller the number of vibrations in any given time. Thus sound, considered in the vibrations that cause it, and the dimensions of the vibrating body, came to be reduced to quantity, and as such was the subject of calculation, and expressible by numbers. For instance, the two sounds that form an octave could be expressed by the numbers 1 and 2, which would represent either the number of vibrations in a given time, or the length of the strings; and would mean, that the acuter sound vibrates twice while the graver vibrates once, or that the string producing the lower sound is twice the length of that which gives the higher. If the vibrations were considered, the higher sound was as 2, the lower as 1; the reverse, if the length was alluded to. In the same manner, in the same sense, the 5th would

be expressed by the ratio of 2 to 3, and the 4th by that of 3 to 4.

Aristoxenus, in opposition to the calculations of Pythagoras, held the ear to be the sole standard of musical proportions. That sense he accounted sufficiently accurate for musical, though not for mathematical, purposes; and it was in his opinion absurd to aim at an artificial accuracy in gratifying the ear beyond its own power of distinction. He, therefore, rejected the velocities, vibrations, and proportions, of Pythagoras, as foreign to the subject, in so far as they substituted abstract causes in the room of experience, and made music the object of intellect rather than of sense.

These conflicting and opposite opinions continued to divide the musical and philosophical world for more than two thousand years; for it was not till about the beginning of the last century that the system of Pythagoras was confirmed by absolute mathematical demonstration; so that, now, the following propositions, in relation to musical sound, have passed from conjecture to certainty.

1. Sound is generated by the vibrations of elastic bodies, which communicate the like vibrations to the air, and these again the like to our organs of hearing. This is evident, because sounding bodies communicate tremors to other bodies at a distance from them. The vibrating motion, for instance, of a musical string, excites motion in others, whose tension and quantity of matter dispose their vibrations to keep time with the undulations of air propagated from the string first set in motion.

2. If the vibrations be isochronous, and the sound musical, continuing at the same pitch, it is said to be acuter, sharper, or higher, than any other sound whose vibrations are slower; and graver, flatter, or lower, than any other whose vibrations are quicker. For, while a musical string vibrates, its vibrations become quicker by increasing its tension or diminishing its length; its sound at the same time will be more acute: and, on the contrary, by diminishing its tension or increasing its length, the vibrations will become slower and the sound graver. The like alteration of the pitch of the sound will follow, by applying, by means of a weight, an equal degree of tension to a thicker or heavier and to a smaller or lighter string, both of the same length, as in the smaller string the mass of matter to be moved by the same force is less.

3. If several strings, however different in length, density, and tension, vibrate altogether in equal times, their sounds will have all one and the same pitch, however they may differ in loudness or other qualities. They are called *unisons*. The vibrations of unisons are isochronous.

4. The vibrations of a musical string, whether wider or narrower, are nearly isochronous. Otherwise, while the vibrations decrease in breadth till they cease, the pitch of the sound could not continue the same (which we perceive by experience it does), unless where the first vibrations are made very violently; in which case, the sound is a little acuter at the beginning than afterwards.

Lastly, The word *vibration* is understood to mean the time which passes between the departure of the vibrating body from any assigned place and its return to the same. See Phil. Trans. for 1714. and Dr. Brook Taylor's *Methodus Incrementorum directæ et inversæ*.

After musical ratios were discovered and reduced to numbers, they were made by Pythagoras and his followers the type of order and just proportion in all things: hence virtue, friendship, good government, celestial motion, the human soul, and God himself, were harmony. This discovery gave birth to various species of music, far more strange and inconceivable than chromatic and enharmonic: such as divine music, mundane music, elementary music, and many other divisions and subdivisions, upon which Zarlino, Kircher, and almost all the old writers, never fail to expatiate with wonderful complacency. It is, perhaps, equally to the credit and advantage of music and



and philosophy, that they have long descended from these heights, and taken their proper and separate stations upon earth; so that we no longer admit of music that cannot be heard, or of philosophy that cannot be understood.

Aristides Quintilianus assures us, that music comprehends arithmetic, geometry, physics, and metaphysics, and teaches every thing, from *solfaying* the scale, to the nature and construction of the soul of man and the soul of the universe. To confirm this, he quotes, as a divine saying, a most curious account of the end and business of music, from one Panæmus, which informs us, that the province of music is not only to arrange musical sounds, and to regulate the voice, but to unite and harmonize every thing in nature. This writer, in solving the question, Whence it is that the soul is so easily affected by instrumental music? acquaints us, in the Pythagorean way, how the soul, frisking about, and playing all kinds of tricks in the purer regions of space, approaches by degrees to our gross atmosphere; gets a taste for matter and solidity, and at length acquires a warm and comfortable body to cover her nakedness. Here she picks up nerves and arteries; there membranes; here spirit or breath; and all in a most extraordinary manner; especially the arteries and nerves: for what should they be made of, but the circles and lines of the spheres, in which the soul gets entangled in her passage, like a fly in a spider's web! Thus, continues he, the body becomes similar in its texture to instruments of the wind and stringed kind. The nerves and arteries are strings, and at the same time they are pipes filled with wind. "What wonder, then," says Aristides Quintilianus, "if the soul, being thus intimately connected with a body similar in construction to those instruments, should sympathize with their motions."

Pythagoras is said, by the writers of his life, to have regarded music as something celestial and divine, and to have had such an opinion of its power over the human affections, that, according to the Egyptian system, he ordered his disciples to be waked every morning, and lulled to sleep every night, by sweet sounds. He likewise considered it as greatly conducive to health, and made use of it in disorders of the body, as well as in those of the mind. His biographers and secretaries even pretend to tell us what kind of music he applied upon these occasions. Grave and solemn, we may be certain; and vocal, say they, was preferred to instrumental; and the lyre to the flute, not only for its decency and gravity, but because instruction could be conveyed to the mind, by means of articulation in singing, at the same time as the ear was delighted with sweet sounds. This was said to have been the opinion of Minerva. In very high antiquity, mankind gave human wisdom to their gods, and afterwards took it from them to bestow it on mortals. In perusing the list of illustrious men who have sprung from the school of Pythagoras, it appears that the love and cultivation of music was so much a part of their discipline, that almost every one of them left a treatise behind him upon the subject.

Euclid, as a writer on music, has ever been held in the highest estimation by all men of science who have treated of harmonics, or the philosophy of sound. As Pythagoras was allowed by the Greeks to have been the first who found out musical ratios, by the division of a monochord, or single string, a discovery which tradition only had preserved, Euclid was the first who wrote upon the subject, and reduced these divisions to mathematical demonstration. His Introduction to Harmonics, (*Ἐισαγωγή Ἀρμονικῆς*), which in some MSS. was attributed to Cleonidas, is in the Vatican copy given to Pappus. Meibomius, however, accounts for this, by supposing those copies to have been only two different MS. editions of Euclid's work, which had been revised, corrected, and restored from the corruptions incident to frequent transcription, by Cleonidas and Pappus, whose names were, on that account, prefixed. It first appeared in print with a Latin version, in 1498, at Venice, under the title of "*Cleonidæ Harmonicum Intro-*"

*ductorium*:" but who Cleonidas was, neither the editor, George Valla, nor any one else, pretends to know. It was John Pena, a mathematician in the service of the king of France, who first published this work at Paris, under the name of Euclid, in 1557. After this, it went through several editions with his other works. His Section of the Canon, *Κατάτοιμη Κανονος* follows his Introduction; it went through the same hands and same editions, and is mentioned by Porphyry, in his Commentary on Ptolemy, as the work of Euclid. This tract chiefly contains short and clear definitions of the several parts of Greek music, in which it is easy to see that mere melody was concerned; as he begins by telling us, that the science of *harmonics* considers the nature and use of melody, and consists of seven parts: sounds, intervals, genera, systems, keys, mutations, and *melopeia*; all which have been severally considered in the dissertation.

Of all the writings upon ancient music, that are come down to us, this seems to be the most correct and compressed: the rest are generally loose and diffused; the authors either twisting and distorting every thing to a favourite system, or filling their books with metaphysical jargon, with Pythagoric dreams, and Platonic fancies, wholly foreign to music. But Euclid in this little treatise is like himself, close and clear; yet so mathematically short and dry, that he bestows not a syllable more upon the subject than is absolutely necessary. His object seems to have been the compressing into a scientific and elementary abridgment, the more diffuse and speculative treatises of Aristoxenus. He was the d'Alembert of that author, explaining his principles, and at the same time seeing and demonstrating his errors. The musical writings of Rameau were diffuse, obscure, and indigested; but d'Alembert, extracting the essence of his confused ideas, methodized his system of a *fundamental bass*, and compressed, into the compass of a pamphlet, the substance of many volumes.

According to Dr. Wallis, (Phil. Transf. No. 242.) Euclid was the first who demonstrated that an octave is somewhat less than *six whole* tones: and this he does in the 14th theorem of his Section of the Canon. In the 15th theorem, he demonstrates that a fourth is less than two tones and a half, and a fifth less than three and a half: but, though this proves the necessity of a temperament upon fixed instruments, where one sound answers several purposes, yet he gives no rules for one, which seems to furnish a proof that such instruments were at least not generally known or used by the ancients. What Aristoxenus called a *half-tone*, Euclid demonstrated to be a smaller interval, in the proportion of 256 to 243. This he denominated a *limma*, or remnant; because, giving to the *fourth*, the extremes of which were called *sona-stabiles*, and were regarded as fixed and unalterable, the exact proportion of 4 to 3, and taking from it two major tones  $\frac{2}{3} \times \frac{2}{3}$ , the limma was all that remained to complete diatessaron. This division of the diatonic genus being thus, for the first time, established upon mathematical demonstration, continued in favour, says Dr. Wallis, for many ages. But these ancient systems have been justly laid aside since the invention of a temperament, as being unfit for the execution of musical compositions in several parts. See Smith's Harmonics, p. 33.

The first lyre, with three strings, is said to have been invented in Egypt by Hermes, under Osiris, between the years 1800 and 1500 before Christ. The second and third string were, perhaps, the octave and fifth of the first, or more probably its fifth and fourth, as it would be easy to sing the octave with the accompaniment of the primitive note only. The melody might be either always in unison with one of the strings, resembling a very simple modern bass part; or the intervals might occasionally be filled up by the voice, without accompaniment. We have, in modern music, a specimen of a pleasing air, by Rousseau, formed on three notes alone, the key-note, with its second and third; but there can be little doubt



that the earliest melodies must have had a greater compass than this; although some suppose the three strings of the oldest lyre to have been successive notes of the scale. It is uncertain when, or by whom, the fourth string was added: but the merit of increasing the number to seven is attributed to Terpander, about the year 700 before Christ, two centuries after Homer: although some persons have asserted that he only brought the improvement from Egypt, and that Hermes was also the inventor of the lyre with seven strings. Pythagoras, or Simonides, about the year 500, added an eighth, and Timotheus a ninth, tenth, and eleventh, string: the number was afterwards extended to two octaves: and Epigonus is said to have used a lyre of forty strings, or rather a harp, as he played without a plectrum. But the theory of the ancient music soon became more intricate than interesting. The lyre of eight strings comprehended an octave, corresponding pretty accurately with the notes of our natural scale; but there was a considerable diversity in the manner of tuning the lyre, according to the great variety of modes and genera that were introduced. These modes were of a nature totally different from the modern modulations into various keys; but they must have afforded a more copious fund of striking, if not of pleasing, melodies, than we have at present. In some of the genera, intervals of a quarter-tone were employed; but this practice, on account of its difficulty, was soon abandoned; a difficulty which is not easily overcome by the most experienced of modern fingers; although some great masters have been said to introduce a progression of quarter-tones, in pathetic passages, with surprising effect.

The narrative of the famous *senatus consultum*, or rather decree, against the musician Timotheus, at Sparta, for augmenting the number of strings on his lyre, is confirmed by Paulinus and Suidas. This curious piece of antiquity is preserved at full length by Boethius, (*De Musica*, cap. i.) Mr. Stillingfleet (*Princ. and Power of Harm.* § 185.) has given an extract from it, in proof of the simplicity of the ancient Spartan music. The fact is mentioned in Athenæus; and Casaubon, in his notes on that author, has inserted the whole original text from Boethius, with corrections, to which we refer the learned reader. We shall here, however, give a faithful translation of this extraordinary Spartan *act of parliament*. "Whereas Timotheus the Milesian, coming to our city, has dishonoured our ancient music, and, despising the lyre of seven strings, has, by the introduction of a greater variety of notes, corrupted the ears of our youth; and by the number of his strings, and the novelty of his melody, has given to our music an effeminate and artificial dress, instead of the plain and orderly one in which it has hitherto appeared; rendering melody infamous, by composing in the chromatic, instead of the enharmonic;—The kings and the ephori have, therefore, resolved to pass censure upon Timotheus for these things; and, farther, to oblige him to cut off all the superfluous strings of his *eleven*, leaving only the *seven* tones; and to banish him from our city, that men may be warned for the future, not to introduce into Sparta any unbecoming customs."

The same story, as related in Athenæus, has this additional circumstance; that, when the public executioner was on the point of fulfilling the sentence, by cutting off the new strings, Timotheus, perceiving a little statue in the same place, with a lyre in his hand of as many strings as that which had given the offence, and showing it to the judges, was acquitted. Indeed the decree only informs us, that the use of a lyre with more than seven strings was not allowed at this time by the Lacedæmonians; but does not prove that the rest of Greece had confined their music within the compass of *seven* notes; nor, consequently, ascertain how many of the *eleven* strings were additions *peculiar* to Timotheus. That the outcry against the novelties of this musician was, however, not confined to Sparta, appears from a passage in Plutarch's Dialogue, where he gives a list of the innovators who had corrupted

and enervated the good old melody, by additional notes both upon the flute and lyre. "Lafus of Hermione," says he, "by changing musical rhythms to the dithyrambic irregularity of movement, and, at the same time, emulating the compass and variety of the flute, occasioned a great revolution in the ancient music. Melanippides, who succeeded him, in like manner, would not confine himself to the old music, any more than his scholar Philoxenus, or Timotheus."

Plutarch also tells us, that the comic poet Pherecrates introduced Music on the stage, under the figure of a woman, whose body was terribly torn and mangled. She is asked by Justice, under the figure of another woman, the cause of her ill-treatment? when she relates her story in the following words: "The first source of all my misfortunes was Melanippides, who began to enervate and debilitate me by his *twelve strings*. However, this would not have reduced me to the deplorable condition in which I now appear, if Cineas, that cursed Athenian, had not contributed to ruin and disfigure me in his dithyrambic strophes, by his false and untuneable inflexions of voice. In short, his cruelty to me was beyond all description; and next to him, Phrynis took it into his head to abuse me by such divisions and flourishes as no one ever thought of before, making me subservient to all his whims, twisting and twirling me a thousand ways, in order to produce from *five strings*, the *twelve* different *modes*. But still, the freaks of such a man would not have been sufficient to complete my ruin, for he was able to make me some amends. Nothing now was wanting but the cruelty of one *Timotheus* to send me to the grave, after maiming and mangling me in the most inhuman manner." "Who is this Timotheus?" says Justice. Music replies:

Oh! 'tis that vile Milesian blade,  
Who treats me like an arrant jade:  
Robs me of all my former fame;  
And loads me with contempt and shame;  
Contriving still, where'er he goes,  
New ways to multiply my woes:  
Nay more, the wretch I never meet,  
Be it in palace, house, or street,  
But straight he tries to clip my wings,  
And *ties* me with a *dozen strings*.

It has been imagined, with much appearances of probability, that the occupation of the first poets and musicians of Greece resembled that of the Celtic and German bards and the scalds of Iceland and Scandinavia. They sung their poems in the streets of cities and in the palaces of princes. They were treated with high respect, and regarded as inspired persons. Such was the employment of Homer. His poems, so justly celebrated, exhibit the most authentic picture that can be found in the annals of antiquity, although perhaps somewhat highly coloured, of the times of which he wrote and in which he lived. Music is always named throughout the *Iliad* and *Odyssey* with rapture; but, as in these poems no mention is made of instrumental music unaccompanied with poetry and singing, a considerable share no doubt of the poet's praises is to be attributed to the poetry. The instruments most frequently named are the lyre, the flute, and the syrinx. The trumpet appears not to have been known at the siege of Troy, although it had come to be in use in the days of Homer himself.

From the time of Homer till that of Sappho, there is almost a total blank in literature. Only a few fragments remain of the works of those poets and musicians whose names are preserved as having flourished between those periods. During the century which elapsed between the days of Sappho and those of Anacreon, no literary productions are preserved entire. From Anacreon to Pindar there is another chasm of near a century. Subsequent to this time, the works still extant of the three great tragic poets, Æschylus, Sophocles, and Euripides, together with those of Plato, Aristotle, Aristoxenus, Euclid, Theocritus, Callimachus,



Callimachus, Polybius, and many others, produced all within a space less than three hundred years, distinguish this illustrious and uncommon period as that in which the whole powers of genius seem to have been exerted to enlighten and instruct mankind in future ages. Then it was that eloquence, poetry, music, architecture, history, painting, sculpture, like the spontaneous blossoms of nature, flourished without the appearance of labour or of art.

The poets, as well epic as lyric and elegiac, were all likewise musicians; so strictly connected were music and poetry for many ages. It would afford amusement to collect the biographical anecdotes of these favourites of genius, and to assign to each the respective improvements made by him in music and poetry; but our limits do not admit of so extensive a disquisition; for which, therefore, reference must be made to the editors and commentators of these authors, and to the voluminous histories of music published by Burney and Hawkins.

The invention of notation and musical characters marked a distinguished æra in the progress of music. There is a diversity of accounts respecting the person to whom the honour of that invention is due; but the evidences seem to preponderate in favour of Terpander, a celebrated poet and musician, to whose genius music is much indebted. He flourished about the 27th Olympiad, or 671 years before Christ.

Before that valuable discovery, music, being entirely traditional, must have depended much on the memory and taste of the performer; and there is an incident mentioned in the accounts handed down to us of the Olympic games, which may serve in some degree to mark the character of music at that time. Lucian relates, that a young flute-player named Harmonides, at his first public appearance in these games, began a solo with so violent a blast, that he *breathed his last breath into his flute, and died on the spot*. When to this anecdote, wonderful to us, and almost incredible, is added the circumstance, that the trumpet-players at these public exhibitions expressed an excess of joy when they found their exertions had neither rent their cheeks nor burst their blood-vessels, some idea may be formed of the noisy and vociferous style of music which then pleased; and from such facts only can any opinion be obtained of the actual state of ancient music. In whatever manner the flute was played on, there is no doubt that it was long in Greece an instrument of high favour, and that the flute-players were held in much estimation. The flute used by Iſmenias, a celebrated Theban musician, cost at Corinth three talents, or 581. 5s. If, says Xenophon, a bad flute-player would pass for a good one, he must, like the great flute-players, expend large sums on rich furniture, and appear in public with a great retinue of servants.

The ancients, it appears, were not less extravagant in gratifying the ministers of their pleasures than ourselves. Amœbæus, a harper, was paid an Attic talent, or 193l. 15s. per day for his performance.

It is proper to observe, that the celebrated musicians of Greece who performed in public were of both sexes; and that the beautiful Lamia, who was taken captive by Demetrius, in the sea-engagement in which he vanquished Ptolemy Soter, and who herself captivated her conqueror, was a public performer, as well as were many other elevated female spirits, who are recorded by ancient authors in terms of admiration. This will not so much surprise us, when it is added, that in modern times, at the *concertorios*, or musical schools, of Venice, of which there are four, the performers, both vocal and instrumental, are all females: the organs, the flutes and French horns, the violins, violoncellos, and even the double-basses, are all played by women.

The state of music among the ROMANS retained but little of the elegance of the Greeks. Their music in general was rough and discordant, and even their hymeneal odes were full of noise and clamour. In the time of Cicero, though the chief part of Greece was subdued by the Romans, yet the Greeks preserved a kind of supe-

riority over their conquerors; and even their consuls submitted to apply for instruction at Athens, and to become disciples of Greek masters. We find several of the Roman emperors wonderfully attached to music. Nero and Commodus make a considerable figure in the history of the art. Nero was very early in life instructed in music. As soon as he became emperor, he sent for Terpnus, a harper in the highest estimation for his excellence in his profession; and would sit till very late for many succeeding days, to hear him sing. Thus by degrees he applied himself to music, till at length he raised himself so high in his own opinion, as to think himself sufficiently skilled for a public performer. He instituted exercises of music, poetry, and eloquence, to be performed at Rome every fifth year. In the year 60, he appeared on the stage at Naples as a public singer, and performed there many days. Among other things, he sung Canace in Labour, Orestes the Matricide, the Blind Oedipus, and the Mad Hercules. His next appearance was in Greece, where he entered the lists with common musicians at the Olympic Games, and, by corrupting the judge, or his competitors, he obtained the prize. He travelled through Greece for the sole purpose of displaying his skill, in singing and playing on the cithara. He every-where challenged the best performers; and, as may be imagined, was always declared victor. He commanded the statues of other victors to be pulled down and defaced, that their memorials might be forgotten. On his return from Greece, he entered Naples drawn by white horses, in the manner of conquerors in the sacred games; and, after having visited many other cities, he made his public entry into Rome through a breach in the wall, with the greatest splendour and solemnity as an Olympic victor, with eighteen hundred prizes, which he had extorted from arbitrators in musical contests. He was dressed in a purple vest, and his robe was adorned with stars of gold; on his head he wore the Olympic crown, and in his right hand he carried the Pythian crown. He was met by all ranks of people; some thousand slaves followed the chariot of Augustus, in which he rode; and the streets were every-where strewn with flowers. He was induced to visit Greece, by being told that he excelled the most celebrated performers on the Grecian stage. He was likewise flattered into an opinion that he understood the poets perfectly; and imagined himself superior to them all, though he was mean enough to recite the compositions of one of his parasites, and to pass them on the public as his own. He was so anxious about his voice, that he used to lie on his back with a thin plate of lead on his stomach; he abstained from all kind of fruits, and such meats as were thought prejudicial to the voice; he ceased to harangue the soldiery or senate, giving out all his orders in writing; he appointed a *phonosens*, or officer to take care of his voice, and would never speak but in his company, whom he ordered, in case he should at any time seem to strain his voice, to stop his mouth with a napkin. But we find that Nero united a fondness for the softest pleasures with a thirst for the greatest cruelties; and that, while he was enjoying the irresistible charms of music, he premeditated the most dreadful and diabolical schemes that ever debased the character of man. The emperor Commodus also, who was almost as great a monster as Nero, appeared frequently on the stage as a public singer.

We shall travel back to Egypt, in order to introduce another royal tyrant who was a lover of music. Ptolemy, the father of Cleopatra, derived his cognomen of *Auletes*, the "flute-player," from his excessive attachment to that instrument. Strabo says of him, that, besides his debaucheries, he applied himself in a particular manner to playing the flute. He had such an opinion of his own abilities, as to institute musical contests at his palaces; and had there the courage to dispute the prize, publicly, with the first musicians of his time; and, as the dress of players on the flute among the ancients was peculiar to that profession, this prince submitted to wear the robe,



the buskins, the crown, and even the bandage and veil, of a tibicen, as may be seen on a beautiful amethyst in the king of France's possession, of inestimable value, which is supposed to have been engraved by command of this prince, and worn by him to gratify his vanity on account of his musical excellence. Indeed the surname of *Auletes* is seriously given to him by Cicero, and by Strabo. He had likewise an opprobrious appellation bestowed on him, by his own subjects, in the Egyptian language, of the same import, being called *Pothingos*, signifying the same as the Greek *Monaulos*, or "single flute." His violent passion for music, and for the company of musicians, gained him the name of *Neos Διόνυσος*, the New Bacchus.

A melancholy truth forces itself upon the mind in reading the history of this prince, and that of the emperor Nero, whom he very much resembled; which is, that, if the heart is depraved, music has not the power to correct it. And, though these musical princes obtained prizes in the public games, they acquired no honour to themselves, nor did they reflect any upon the profession of music. A musician is so distant in character and dignity from a sovereign prince, that the one must stoop too low, or the other mount too high, before they can approximate; and the public suffers with equal impatience, a sovereign who degrades himself, or an artist who aspires at a rank above his station in the community. An inordinate love of fame, or a rapacious desire of monopolizing all the glory as well as goods of this world to themselves, must have incited these princes to enter the lists in competition with persons so much their inferiors: a passion that should always be distinguished from the love of music, which they might have gratified either from their own performance, or from that of others, in private, much more commodiously than on a public stage.

Among the Romans, the minstrels had the privilege of eating in the temple of Jupiter; they wore a long gown as the badge of their profession, and claimed the liberty of walking in procession through the streets of Rome in their robes, three days in every year, exercising their art, and indulging themselves in the most extravagant excesses.

The northern nations had likewise their bards, who were allowed considerable rank, and respected with a degree of veneration. The laws of the ancient Germans were written in verse, and the stanzas in which they were composed were generally sung. To the songs of the bards, or *skalds*, we owe the first accounts of the Swedish history. These poets were held in high esteem; they were constantly admitted to the king's presence, and frequently were both his generals and ministers. At a time when the knowledge of letters was not general in Europe, it is not to be wondered at, that many actions thought worthy to be consigned to posterity were recorded in words composed according to a certain measure, by which the ear alone might determine if any word had been omitted or altered.

Princes and great men, when they went from home, always considered the honour of their wives secure, when under the protection of a *bard*. Ægythus could not get the advantage of Clytemnestra till he had removed the bard who was the guardian of her morals. It is however remarkable, that in the space of twenty-nine years, the favourite bards or musicians of three queens, belonging to this island, fell sacrifices for departing from the ancient character.—Mark Smeaton, musician and groom of the chamber to Anne Bullen, was accused of being too great a favourite of the queen, for which he was executed May 12, 1536.—Thomas Abel, musical preceptor and grammarian to queen Catharine, wife to Henry VIII. was hanged and quartered, July 30, 1540, for having written a treatise against the divorce.—And David Rizzio, secretary to Mary queen of Scots, on suspicion of an improper correspondence with her, was murdered in her presence, March 9, 1565. Charity, perhaps, may attribute their unhappy exits to the turbulence of the times in

which they lived; but we certainly do not set musicians to guard the chastity of women in the present day.

Among the Saxons and Danes, music was in great repute; it is recorded that Alfred the Great introduced himself in the character of a harper into the Danish camp; and, passing unsuspected through every quarter, he gained admission, by his excellence on that instrument, to the principal general; and, discovering their great neglect of all military regulations, he seized the favourable moment, took the field at the head of his troops, forced the camp, routed them with great slaughter, and gained a complete victory. See the article ENGLAND, vol. vi. p. 550.

It is related that the sacred poet Cadmon, who lived during the heptarchy, had attached himself to much to serious studies, that he neglected music; and, being sometimes in company where the harp used to go round, (for it was customary at festivals, for each of the company to sing and play in his turn,) he left the company, being ashamed that it should be remarked he was deficient in a branch of education which was esteemed necessary to complete the character of a gentleman. *Bede*, lib. iv. c. 24.

In one of the ecclesiastical laws of Canute, the second Danish monarch who swayed the English sceptre, among other things it is ordered, that every Christian learn the Lord's Prayer and the Creed. In this law is a remarkable passage, which serves in some measure to show in what general use music was in those days; it says, that "Christ himself *sung* the Pater-noster," for which reason perhaps our boys and girls are taught to *sing* the bible to this day.

Music had been so long in vogue, that at last the word *sungen* came to signify not only to *sing*, but to *pray*; a proof of this may be found in Oelfrick's Canons to Bishop Wulfen, where, in his direction for visiting the sick, he expresses the rule of St. James, "And they shall pray over him," in these words: *Hi him ofer singon*; that is, "they shall *sing* over him." James iv. 14.

Music was introduced into the Christian church by Christ and his apostles, as plainly appears in many parts of the New Testament. St. Matthew says, that, when our Saviour and his disciples *had sung a hymn, they went out into the Mount of Olives*. St. Mark gives the same account; and this is recorded to have taken place immediately after our Saviour's institution of his blessed supper. *Matth. xxvi. Mark xiv.* St. Paul, in his Epistle to the Ephesians, a people distinguished by peculiar vices, remarkable for drunkenness and excess, admonishes them thus: "Be not drunk with wine, wherein is excess; but be filled with the Spirit, *speaking to yourselves in psalms and hymns, and spiritual songs, singing and making melody in your hearts unto the Lord.*" Eph. v. 8. St. Matthew says, "When Jesus came into the ruler's house, he saw the *minstrels* and the people making a noise;" that is, they were tumultuously bewailing and lamenting the ruler's daughter. *Matth. ix. 23.* In the Acts of the Apostles, we read, that "Paul and Silas, being imprisoned, at midnight prayed and *sung praises unto God*, and the prisoners heard them." Acts xvi. 25.

Among the Cambro-Britons, music was in such general estimation, that the character of a gentleman was considered as imperfect, if he was not able to perform sufficiently on the harp to accompany the Welsh songs; and they paid the highest respect to their bards. The first musician, or bard, was the eighth officer in dignity at the court of the Welsh kings. Music was considered by them as a regal accomplishment; and to sing to the harp was thought necessary to form a perfect prince and complete hero. When Edward I. of England conquered Wales, he found that the songs of the Welsh bards had so powerful an influence over the minds of the people, that he adopted the cruel policy of putting them all to death. British harpers were in great repute long before the conquest. In Doomsday-book is recorded the bounty of William the Conqueror to his bard.

Richard I. in his return from the holy wars in Palestine, not



not thinking it safe to pass through France, sailed to the Adriatic, and, being shipwrecked, landed upon the coast of Italy. He put on the habit of a pilgrim, with an intention of taking his journey in this disguise through Germany; but, being discovered, he was arrested, and confined close prisoner in a castle, by Leopold duke of Austria, who sold him to the emperor Henry VI. No one knew, but those immediately concerned, where he was. Blondel, his minstrel, or bard, missing his royal master, wandered through a vast extent of country in search of him. After a considerable time he came to the castle where he was confined; and, enquiring whether there were any prisoners in it, was answered that there was one prisoner, who had been there a year, but who he was remained a secret. Blondel could not obtain a sight of the prisoner; but he thought of an expedient to satisfy himself whether it was his royal master or not. Placing himself over against a window of the tower, wherein the captive was, he began to sing a Provençal song, which they had composed together: when Blondel had sung the first part, Richard immediately began the other, and sung it through; by which means Blondel discovered the condition of his sovereign, and immediately returned to England, that measures might be taken for his liberation.

Henry III. in the 26th year of his reign, gave forty shillings and a pipe of wine to Richard his harper, and likewise a pipe of wine to Beatrice the harper's wife. Edward I. his son and successor, a short time before he ascended the throne, took his harper with him to the Holy Land; and, when Edward was wounded with a poisoned knife at Ptolemais, the musician rushed into the royal apartment and killed the assassin. But we have not many instances of fighting musicians: their business, in war, seems to be to make others fight. John of Gaunt, king of Castile and Leon, and duke of Lancaster, granted a charter to the minstrels, bearing date the 22d of August, in the 4th year of Richard II. intitled, "*Carta de Roy de Minstrelle*." This charter included the counties of Stafford, Derby, Nottingham, Leicester, and Warwick; it gave the governor the title of *King of the Minstrels*. He held court; and had power to apprehend and arrest, to impanel juries, hear complaints, and determine controversies between the members of his society. Edward IV. likewise granted a charter to the minstrels, which bears date April 24th, 1469, making them one body and commonalty perpetual; and Charles I. in the 11th year of his reign, granted them another charter. About the year 1330, Philip de Valois granted the minstrels of Paris a charter; and in the year 1331, Jaques Grure and Hugues le Lorrain, two of the minstrels, built the church of St. Julien des Ménestriers, and the company were allowed patrons, governors, and administrators, of the same. But the licentiousness of their conduct caused them to be banished by Philip Augustus, in the first year of his reign; they were however recalled by his successor. In the reign of Charles VI. in the year 1401, the minstrels obtained another charter; but at length their insolent demeanour degraded them in the public opinion, and they sunk into total neglect, and, from being seated at the tables of kings and heroes, were necessitated to become companions of the lowest orders of the people.

Among the Irish and Scotch, not only their kings, but every petty chief, had anciently their bards attending them; and the chief bards had a number of inferior ones in their train. The duties of the chief bards were to attend their patrons to the field of battle, to animate them by their verse, and by their music; to celebrate their achievements; to write birth-day odes, and funeral elegies; and to sing their odes to the modulations of the harp. Upon particular occasions, when they celebrated their victories, or lamented their chiefs slain in battle, they would all join in one chorus. Many of these odes are yet preserved; and Mr. O'Halloran mentions, in his History of the Antiquities of Ireland, that he has several of them in his possession, and that they are beautiful and animat-

ing in the highest degree. The Irish excelled greatly in composition and execution in music; Polydore Virgil declares, *Hiberni sunt musica peritissimi*. The bards among the ancient Irish composed a part of the body of the Literati. The Literati were considered as a body of men of the first consequence. The arch-druid, which was a dignity of the highest trust, and conferred on some branch of the royal family, was their chief; they were exempt from all civil jurisdiction, and acknowledged no power but that of the arch-druid; they possessed large estates, which were settled on them; were not subject to public taxes, and their persons and property were inviolable; it was sacrilege to molest them. After the introduction of Christianity, some of the bards served likewise in the capacity of clergymen; but, living in the full enjoyment of such singular immunities, the members of their order became so very numerous, and so insufferably insolent, that their chiefs retrenched their fraternity, and lessened their privileges.

The genius of the Scots has in different ages conspicuously appeared, not only in the more useful branches of literature, but likewise in poetry and music; and, as long as a pure and genuine taste remains, the music of the old Scottish songs will continue to be admired. The melodies, particularly those of a melancholy cast, are so very chaste, and express the passions so strongly, that their various strains seem to breathe the language of hope, despondency, or supplication. The vulgar opinion that David Rizzio was the composer of the old Scottish melodies, is an idle conjecture, which has long since been exploded. Many of them were known as far back as James I. of Scotland; and, as this monarch is celebrated by several historians, not only as a considerable poet, but also as a great theorist in music, and an excellent performer on the lute and harp; some have styled him "the father of the Scottish songs." In the royal exhibition at Somerset-house, in 1793, there was a picture of James playing on the harp; and in the moulding of the under part of the frame was written, "King James the first of Scotland, the original inventor of the Scotch music." Some have pretended to trace back the old Scottish melodies long before the reign of James I. and have thought them to be the wild tunes of the shepherds or highland-pipers; and have likewise imagined the more modern ones to be the effusions of the strolling minstrels. James I. IV. and V. kings of Scotland, were great friends to the bards; poetry and music during their reigns were in great estimation. The Scottish nobility, possessed of large estates and a numerous vassalage, lived, during the vigour of the feudal system, in the greatest state and splendour; their festivals were conducted with the utmost magnificence, and every chief of a clan entertained his bard with honourable distinction. In the course of time, the order of bards degenerated into strolling minstrels, who wandered through the country with their harps. There was one of them living about fifty years ago, called Roderic Dall: his compositions were in great repute among the highland families of distinction; he was thought a fine player on the harp, and used to sing in a very pleasing manner.

Most nations have agreed in introducing music into their religious ceremonies. That art was early admitted into the rites of the Egyptians and Hebrews; and that it constituted a considerable part of the Grecian and Roman religious service, appears from the writings of many ancient authors. The same pleasing art soon obtained an introduction into the Christian church, as we have already noticed. There remain no specimens of the music employed in the worship of the primitive Christians; but probably it was at first the same with that used in the pagan rites of the Greeks and Romans. The practice of chanting the psalms was introduced into the western churches by St. Ambrose, about 350 years after Christ. In the year 600, the method of chanting was improved by St. Gregory the Great. So early as the age of Constantine the Great, prior to either of the periods last mentioned,



when the Christian religion first obtained the countenance of power, instrumental music came to be introduced into the service of the church. In England, according to bishop Stillingfleet, music was employed in the church-service, first by St. Augustine, and afterwards much improved by St. Dunstan, who was himself an eminent musician, and who is said to have first furnished the English churches and convents with the organ. The organ, the most majestic of all instruments, seems to have been an improvement of the hydraulicon, or water-organ of the Greeks. The first organ seen in France, was sent from Constantinople in 757, as a present to king Pepin from the emperor Constantine Copronymus VI. In Italy, Germany, and England, that instrument became frequent about the 10th century.

During the dark ages no work of genius or taste in any department of science seems to have been produced in any part of Europe; and, except in Italy, where the cultivation of music was rather more the object of attention, that art was neglected equally with all others. There has always been observed a correspondence in every country between the progress of music and the cultivation of other arts and sciences. In the middle ages, therefore, when the most fertile provinces of Europe were occupied by the Goths, Huns, Vandals, and other barbarous tribes, whose language was as harsh as their manners were savage, little perfection, and no improvement, of music is to be looked for. Literature, arts, and refinements, were encouraged more early at the courts of the Roman pontiffs than in any other country; and owing to that circumstance it is, that the scale, the counterpoint, the best melodies, the dramas religious and secular, the chief graces and elegancies of modern music, have derived their origin from Italy. In modern times, Italy has been to the rest of Europe what ancient Greece was to Rome. The Italians have aided the civilization of their conquerors, and enlightened the minds of those whose superior prowess had enslaved them.

*Counterpoint*, or music in parts, seems to be an invention purely modern. The term *harmony* meant in the language of antiquity what is now understood by *melody*. Guido, a monk of Arezzo, in Tuscany, is, in the general opinion, supposed to have entertained the first idea of counterpoint about the year 1022: an art which, since his time, has experienced gradual and imperceptible improvements, far exceeding the powers or comprehension of any one individual. The term counterpoint, or *contra punctum*, denotes its own etymology and import. Musical notation was at one time performed by small points; and the present mode is only an improvement of that practice. Counterpoint, therefore, denotes the notation of harmony, or music in parts, by points opposite to each other. The improvements of this important acquisition to the art of music kept pace at first with those of the organ; an instrument admirably adapted to harmony: and both the one and the other were till the 13th century employed chiefly in sacred music. It was at this period that sacred music began to be cultivated.

Giraldus Cambrensis, otherwise Archbishop Baldwin, ranks the musical proficiency of the Welsh above that of any other nation of the time. It is to be observed, that he wrote about the year 1188. "In their musical concerts (says he), they do not sing in unison, like the inhabitants of other countries, but in many different parts; so that in a company of singers, which one very frequently meets with in Wales, you will hear as many different parts and voices as there are performers, who all at length unite with organic melody, in one consonance, and the soft sweetness of B flat. In the northern district of Britain, beyond the Humber, and on the borders of Yorkshire, the inhabitants make use of the same kind of symphonious harmony, but with less variety; singing only in two parts, one murmuring in the bass, the other warbling in the acute or treble. Neither of the two nations has acquired this peculiarity by art, but by long habit, which

has rendered it natural and familiar; and the practice is now so firmly rooted in them, that it is unusual to hear a simple and single melody well sung; and, what is still more wonderful, the children, even from their infancy, sing in the same manner. As the English in general do not adopt this mode of singing, but only in the northern counties, it seems probable that these parts of the island were more frequently invaded, and remained longer under the dominion of the Danes and Norwegians, from whom the natives contracted their mode of singing, as well as of speaking." Hoare's *Translation of the Itinerary of Archbishop Baldwin*, p. 320.

Before the invention of characters for a time, music in parts must have consisted entirely of *simple counterpoint*, or note against note, as is still practised in psalmody. But the happy discovery of a time-table extended infinitely the powers of combined sounds. The ancients had no other resource to denote the time and movement in music except two characters, ( " ), equivalent to a long and a short syllable. But time is of such importance in music, that it can impart meaning and energy to the repetition of the same sound. Without it, variety of tones has no effect with respect to gravity and acuteness. The invention of the *time-table* was long ascribed to John de Muris, (see MURIS, p. 225.) who flourished about the year 1330; but it is now clearly proved that the inventor was Magister Franco, of Cologne, author of a treatise *De Musica Mensurabili*, about the year 1080, two hundred and fifty years before Muris was born, in which the form of the notes is given, and their relative value explained. This very scarce treatise is preserved in the Bodleian library, 842. f. 49. In the ancient primitive time-table, the shortest notes then in use are those which are now the longest, namely, the semibreve and minim; and these, only, as now, were open; the other, longer, notes, were black, like our short notes at present.

During almost two centuries after the arrangement of the scale attributed to Guido, and the invention of the time-table ascribed to Franco, no remains of secular music can be discovered, except those of the troubadours or Provençal poets. In the simple tunes of these bards no time indeed is marked, and but little variety of notation appears. It is not difficult, however, to discover in them the germs of the future melodies, as well as the poetry, of France and Italy.

In the 13th century melody seems to have been little more than plain song, or chanting. The notes were square, and written on four lines only, like those of the Romish church, in the clef C, and without any marks for time. It was not till towards the end of St. Louis's reign (1269) that the fifth line began to be added to the staff.

As the *lyre* is the favourite instrument in Grecian poetry, so the *harp* held the same place in the estimation of the poets who flourished in the period of which we at present speak. A poet of the 14th century, Machau, wrote a poem on the subject of the harp alone; in which he assigns to each of its 25 strings an allegorical name; calling one *liberality*, another *wealth*, &c. The instrument which frequently accompanied, and indeed disputed the pre-eminence with, the harp, was the *viol*. Till the 16th century this instrument was furnished with frets; after that period it was reduced to four strings; and still, under the denomination of *violin*, holds the first place among the treble instruments. The viol was played with a bow, and differed entirely from the *vielle*, the tones of which were produced by the friction of a wheel: the wheel performed the part of a bow.

British harpers were famous long before the conquest: Giraldus Cambrensis (writing in 1188) says, that the Welsh bards, and singers, or reciters, have the genealogies of their princes, written in the Welsh language, in their ancient and authentic books, and also retain them in their memory, from Roderic the Great, from whom they ascend to Sylvius, Afcanius, Æneas, and thence to Adam! *Hoare's Itinerary of Archbishop Baldwin*. The harp continued



tinued to be the favourite instrument in Britain for many ages, under the British, Saxon, Danish, and Norman, kings. The *fiddle*, however, is mentioned so early as 1200 in the legendary life of St. Christopher.

Chaucer, who in the 14th century enlarged our vocabulary, polished our numbers, and with acquisitions from France and Italy augmented our store of knowledge, entitles one of his poems the History of St. Cecilia; and the celebrated patroness of music must no doubt be mentioned in a history of the art. Neither in Chaucer, however, nor in any of the histories or legendary accounts of this saint, does any thing appear to authorize the religious veneration paid to her by the votaries of music; nor is it easy to discover whence it has arisen. She was a native of heathen Rome, and suffered martyrdom for refusing to renounce the Christian religion, though her several legends are not agreed either as to the period of her birth or sufferings, nor as to the particular death to which she was condemned. She is stated to have very early made a vow of perpetual chastity, but that her parents nevertheless compelled her to marry a young man named Valerianus, a heathen, and who, "going to bed on the wedding-night, as," we are told, "*the custom then was*," received information from his spouse that he must withdraw from her chamber, as she was nightly visited by an angel from heaven, who would otherwise destroy him. Valerianus pleaded for an interview with the angel, which Cecilia explained to him as impossible, unless he would abjure his pagan errors, and receive baptism; adding such "sweet and convincing arguments" in support of her superior faith, as in the end completely to convince his reason. Valerianus, therefore, and his brother Tibertius, to whom he communicated all that had passed, were made converts to the true church; shortly after which the good husband found his wife at prayers in her closet, and by her side, joining in her devotion, an angel clothed with brightness, in the shape of "*a beautiful youth*;" who assured Valerianus, that both his own and his brother's conversion were accepted, and would soon be crowned with the "blessings of martyrdom." Valerianus and Tibertius were soon after *beheaded*, as the angel had *encouraged them to hope*; and Cecilia, still remaining steadfast, in despite of the efforts made to persuade or intimidate her into idolatry, was, according to some authors, thrown into a cauldron of boiling water and scalded to death, or, as others state, stifled in a dry bath; while some assert, that, surviving the latter attempt on her life, she was *beheaded*. Her martyrdom is generally regarded as having taken place about the year 230, though there are various authorities which place it so early as between 176 and 180. There is at Rome an elegant church dedicated to St. Cecilia, which it would be deemed prophane not to believe to stand on the precise site of the house in which she received the visits of her heavenly admirer; and, conforming to the tale of her having been scalded to death, a chapel is shown which is declared to have been erected on the spot where she met that dreadful fate. To this saint, as we have said, has been assigned the patronage of ecclesiastical melody, from her alleged excellence in singing the divine praises, to which she joined instrumental music: and we are not only assured, by the members of the papal church, that the angel who was enamoured of her, quitted the celestial mansions, overcome by the fascination of her harmony; but that, when she was *beheaded*, he joined in a sweet melodious concert with other angels, who conducted her to the realms of bliss. When Stationers' Hall was rebuilt after the fire of London, a solemn annual musical meeting was held there on her anniversary; and for the celebration of that solemnity, Purcell composed his justly-admired *Te-Deum and Jubilate*; while it is to be noticed, that Dryden, Pope, and others of our best poets, composed Odes on St. Cecilia's Day, all joining in her praise as the patroness of music, and, according to poetical licence, alluding to the story of an angelic admirer

coming down to visit her. Dryden's Alexander's Feast, which, for its strength and beauty of expression, stands pre-eminent, closes with the following encomium on this musical saint:

Ere heaving bellows learn'd to blow,  
While organs yet were mute;  
Timotheus, to his breathing flute  
And sounding lyre,  
Could swell the soul to rage, or kindle soft desire.  
At last divine Cecilia came,  
Inventress of the vocal frame;  
The sweet enthusiast, from her sacred store,  
Enlarg'd the former narrow bounds,  
And added length to solemn sounds,  
With nature's mother-wit, and arts unknown before.  
Let old Timotheus yield the prize,  
Or both divide the crown;  
He rais'd a mortal to the skies,  
She drew an angel down.

The title of *doctor in music*, peculiar to the universities of our own country, according to Anthony Wood was first conferred in the reign of king Henry II, but this is fixing it at an earlier period than that in which such a title can be proved to have subsisted at Oxford or Cambridge, or to have been conferred on the professors of other sciences. Spelman, a more nice and accurate sifter of facts, believes that the appellation of doctor was not among the degrees granted to graduates in England till the reign of king John, about 1207.

It is known that this title was created on the continent about the middle of the twelfth century, as more honourable than that of *magister*, or master, which was become too common. Its original signification implied not only learning and skill, but abilities to teach, according to the opinion of Aristotle, who says, that the most certain proof of knowledge in any science is the being able to instruct others. John de Muris begins the second part of his Treatise on Music with the following passage: "*Principes philosophorum Aristoteles ait in principio mathematicæ suæ, omnino scientis signum est posse docere.*" *Musices Tract.* MS. Bodl. 300.

But the precise time when this creation extended to the faculties of medicine and music does not appear; nor can the names be found of those professors in either to whom the title was first granted. It has, however, been frequently remarked, (Burney's Hist. Mus. vol. ii.) that during the middle ages music was always ranked among the seven liberal arts, that it was included in the trivium and quadrivium, and that it was studied by all those who aspired at reputation for learning throughout Europe. The *trivium* comprised the three sciences of grammar, rhetoric, and logic, which teach us how to reason with accuracy and precision; and the *quadrivium* comprehended arithmetic, music, geometry, and astronomy, as the four branches of the mathematics which silently contemplate whatever is capable of being numbered or measured. Now it is remarkable, that, in our universities, *music* is the only one of these seven sciences that confers degrees on its students; and in other countries, though theology, law, and medicine, bestow this honour, which are *not* of the seven, yet music, which *is*, can aspire at no such distinction. However, it evidently appears that the music which was regarded as a science by our forefathers, was merely speculative, and such as concerned harmonics, the ratio of musical intervals, and the philosophy of sound; and in this sense musical degrees are perhaps but seldom conferred in our universities according to the original spirit of the institution. But the present statutes, not wholly neglecting the gratification of the ear, are more favourable to practical music, and allow candidates for degrees to perform exercises, in which specimens may be furnished of their skill in melody, harmony, and composition, where those sounds are arranged and combined which science measures and fixes by calculation.



By the statutes of the university of Oxford, it is required of every proceeder to the degree of bachelor in music, that he employ seven years in the study or practice of that faculty, and at the end of that term produce a testimonial of his having so done, under the hands of credible witnesses; and that, previous to the supplication of his grace towards this degree, he compose a piece of five parts, and perform the same publicly in the music-school, with vocal and instrumental music, first causing to be affixed on each of the doors of the great gates of the schools a programma, giving three days notice of the day and hour of each performance. Of a bachelor proceeding to the degree of doctor, it is required that he shall study five years after the taking his bachelor's degree, and produce the like proof of his having so done as is requisite in the case of a bachelor; and farther, shall compose a piece in six or eight parts, and publicly perform the same "tum vocibus quam instrumentis etiam musicis," on some day to be appointed for that purpose, previously notifying the day and hour of performance in the manner before prescribed. Such exercise to be performed in the presence of Dr. Heyther's professor of music. This being done, the candidate shall supplicate his grace in the convocation-house; which being granted by both the Savilian professors, or by some master of arts deputed by them for that purpose, he shall be presented to his degree.

The first qualification for the degree either of bachelor or doctor in music, was formerly the reading and expounding of certain books in Boethius, as the only writings whence knowledge in the principles of the science could be acquired. (See the statutes of the university.) But the candidate for academical degrees is no longer put to this test; he is now to compose an exercise for voices and instruments in six or eight parts, which he is to submit to the inspection of the music-professor, and to have publicly performed in the music-school of the university.

Wood, in his *Fasti*, has been able to produce no names of musicians that have been enrolled among the graduates of the university of Oxford before the sixteenth century, though we are told of several at Cambridge of an earlier period. John Hambois is imagined by some to be the first musician who was honoured in England with the title of doctor; but, whether this Hambois was a member of this university, or of Oxford, does not appear; nor indeed is it precisely known at what time he received his diploma. In Hollinshed's *Chronicle*, vol. ii. p. 1355, there is an enumeration of the most eminent men of learning in the reign of Edward IV. among whom the author includes John Hambois, "an excellent musician," adding, that "for his notable cunning therein he was made a doctor of music." But academical honours in the faculty of music may be traced up to the year 1463, when Henry Habington was admitted to the degree of bachelor of music at Cambridge, and Thomas Saintwix, doctor in music, was made master of king's college in the same university.

After the invention of printing, an art which has tended to disseminate knowledge with wonderful rapidity among mankind, music, and particularly counterpoint, became an object of high importance. The names of the most eminent composers who flourished in England, from that time to the reformation, were, Fairfax, William of Newark, Sheryngham, Turges, Banister, Tudor, Taverner, Tye, Johnson, Parsons; to whom may be added John Marbeck, who set the whole English cathedral-service to music.

Before the reformation, as there was but one religion, there was but one kind of sacred music in Europe, plain chant, and the descent built upon it. That music likewise was applied to one language only, the Latin. On that account, the compositions of Italy, France, Spain, Germany, Flanders, and England, kept pace in a great degree with each other in style and excellence. All the arts seem to have been the companions, if not the produce, of successful commerce: they appeared first in Italy, then in the Hanseatic Towns, next in the Nether-

lands; and during the sixteenth century, when commerce became general, in every part of Europe.

In the sixteenth century music was an indispensable part of polite education. All the princes of Europe were instructed in that art. There is a collection preserved in manuscript called *Queen Elizabeth's Virginal Book*. Dr. Burney says, that, if her majesty was able to execute any of the pieces in that book, she must have been a great player; and he adds, what we (who have not seen them) can hardly credit, that a month's practice would not be sufficient for any master now in Europe to enable him to play one of them to the end. *Tallis*, singularly profound in musical composition, and *Bird* his admirable scholar, were two of the authors of this famous collection. During the reign of Elizabeth, the genius and learning of the British musicians were not inferior to any on the continent; an observation scarcely applicable at any other period of the history of this country. Sacred music was the principal object to study all over Europe.

During the sixteenth century, and a great part of the next, many of the most eminent musical theorists of Italy employed their time in subtle divisions of the scale, and visionary pursuits after the ancient Greek genera; nor was this rage wholly confined to theorists, but extended itself to practical musicians, ambitious of astonishing the world by their deep science and superior penetration, though they might have employed their time more profitably to themselves, and the art they professed, in exploring the latent resources of harmonic combinations and effects in composition, or in refining the tone, heightening the expression, and extending the powers of execution, upon some particular instrument. These vain enquiries certainly impeded the progress of modern music; for hardly a single tract or treatise was presented to the public, that was not crowded with circles, segments of circles, diagrams, divisions, subdivisions, commas, modes, genera, species, and technical terms, drawn from Greek writers, and the now unintelligible and useless jargon of Boethius.

Don Nicolo Vicentino, published at Rome, 1555, a work in quarto, entitled *L'Antica Musica ridotta alla moderna Prattica*, or "Ancient Music reduced to modern Practice," with precepts and examples for the three genera and their species; to which is added, an account of a new instrument for the most perfect performance of music, together with many musical secrets. Vicentino, by the title of *Don* prefixed to his name, seems to have been an ecclesiastic of the Benedictine order. He was a practical musician, and appears to have known his business. In his treatise he has explained the difficulties in the music of his time, with such clearness, as would have been useful to the student, and honourable to himself, if he had not split upon enharmonic rocks and chromatic quicksands. He gives a circumstantial account of a dispute between him and another musician at Rome, Vicentio Lusitano, who maintained that modern music was entirely diatonic; while Vicentino was of opinion, that the present music was a mixture of all the three ancient genera, diatonic, chromatic, and enharmonic. This dispute having produced a wager of two gold crowns, the subject was discussed in the pope's chapel, before judges appointed by the disputants, and determined against Vicentino; whether justly or unjustly, depends upon the precise sense assigned to the term *chromatic* by the several disputants. Though Vicentino lost his wager by the decision of the judges against him, he recovered his honour some time after, by his antagonist, Lusitano, recanting, and coming over to his opinion. According to Kircher, Vicentino was the first who imagined that the proportions or ratios of the ancient diatonic genus were inadmissible in our counterpoint; and tried in his work to establish the tetrachord to consist of a major semitone, and two tones, one major and one minor; which forms the diatonic syntonas of Ptolemy, which Zarlino has propagated, and which is now in general use.



Other eminent musical theorists of Italy, who flourished in the sixteenth century, were, Franchinus Gafierius, or Gafforio of Lode, Pietro Aaron of Florence, Lodovico Fogliano, Giov. Spatro, Giov. Maria da Terentio Lanfranco, Steffano Uanneo, Anton. Francisco Done, Luigi Dentice, and Gioseffo Zarlino, the most general, voluminous, and celebrated, theorist of that period; Vincentio Galilei, a Florentine nobleman, and father of the great Galileo; Maria Artufe of Bologna, Orafeo Tegrini, Pietro Pontio, Lodovico Zacconi, &c. The principal Roman authors were, Giovanni Annuccia, Giovanni Pierluigi da Palestrina, justly celebrated, Ruggiero Giovanelli, Luca Marenzio, who brought to perfection madrigals, the most cheerful species of secular music. Of the Venetians, Adrian Willaeri is allowed to be at the head. At the head of the Neapolitans is deservedly placed Rocco Rodio. Lombardy might also furnish an ample list of eminent musicians during the sixteenth century, of whom, however, our limits will not admit of a particular enumeration: the chief of them were, Constanzo Porta, Gafoldi, Bissi, Cima, Vocchi, and Monteverde. At Bologna, besides Artusi already mentioned, Andrea Rota of the same city appears to have been an admirable contrapunctist. Francisco Corteccia, a celebrated organist and composer, and Alessandro Striggio, a lutanist, and voluminous composer, were the most eminent Florentines.

The inhabitants of the extensive empire of Germany, have long made music a part of general education. They hold the place, next to Italy, among the most successful cultivators of the art. During the sixteenth century, their most eminent composers of music, and writers on the subject, were, Geo. Reichius, Michael Roswick, Andreas Ornithorparhus, Paul Hofhaimer, Luspinius, Henry Loris or Lorit, Faber, Fink, Hofman, and many others whom it would be tedious to mention; and for a particular account of whose treatises and compositions we must refer to more voluminous histories of music.

In France, during the sixteenth century, no art except the art of war made much progress in improvement. Ronfard, Baif, Goudimel, Claud le Jeune, Caurroy, and Maudit, are the chief French musicians of that period.

In Spain, music was early received into the circle of sciences in the universities. The musical professorship at Salamanca was founded and endowed by Alfonso the Wise, king of Castile. One of the most celebrated of the Spanish musicians was Francis Salinas, who had been blind from his infancy. He was a native of Burgos. Don Cristoforo Morales, and Tomaso Lodovico da Vittorio, deserve likewise to be mentioned; and to mention them is all we can attempt; the purpose of which is, to excite more minute enquiry by those who may choose to investigate the subject particularly.

The Netherlands, likewise, during the period of which we have been speaking, produced eminent composers; of whom we may mention Verletot, Gombert, Arkadelt, Berchem, Richefort or Ricciafort, Crequilon, Le Coq, Canis, Jacob Clemens Non Papa, Pierre Manchicourt, Baston, Kerl, Rore, Orlandi da Lasso, and his sons Ferdinand and Rodolph.

Though organs were known in churches as early as the year 663, yet figured basses, that is, what we now call *thorough bass*, were not practised till about 1605, near a thousand years after. *Stevens's Gresham Lectures*, Trinity Term, 1817.

Ludovico Viadana, the inventor of the expedient of expressing chords by figures in accompaniment or thorough-bass, which the Italians call *basso continuo*, was born at Lodi, in the Milanese, the latter end of the sixteenth century. His first preferment was that of maestro di cappella of the cathedral of Fano, and the second that of Mantua. He was one of the most distinguished ecclesiastical composers of his time. Instances of the minute beginnings of this expedient have been observed previous to the time of Viadana; but he was, doubtless, the first who drew up general rules for expressing harmony by

figures over the bass in 1615. Draudius, in an ample list of his ecclesiastical compositions, which were very numerous, tells us of one that authenticates his claim to this invention, which was a collection of all his choral pieces, of one, two, three, and four, parts; "with a continued and general bass, adapted to the organ according to a new invention, and useful for every finger as well as organist; to which are added short rules and explanations for accompanying a general bass, according to the new method." Viadana was therefore the first who composed an organ-bass different from the voice-part, in the execution of which the new-invented figures enabled the performer to give the fingers the whole harmony of the several parts of a full composition, without seeing the score. This practice was introduced into France about the year 1650, by Henry du Mont; (see vol. xv. p. 712.)

In the seventeenth century, the greatest performer on the organ and harpsichord, and the best composer for those instruments that Italy could boast, was Girolamo Frescobaldi, a native of Ferrara; but who went early in his life to Rome with his master Milleville, where he was elected organist of St. Peter's church. All the musical writers of Italy have celebrated his talents; and his works, which still remain, are indisputable vouchers of the truth of their encomiums. Quadrio says, that early in his youth, as a singer, he delighted every ear, and was praised by every tongue in the principal cities of Italy. But his chief excellence consisted in composing and playing on the organ and harpsichord, for which he became so renowned, that his works, both printed and manuscript, were in the hands of all professors and collectors of musical compositions. According to Della Valle, Frescobaldi was living in 1641. His first work, entitled "*Ricercari e Canzoni Francese, fatte sopra diversi obblighi in Partitura, libro primo, 1615*," contains the first compositions we have seen printed in score, and with bars. They are likewise the first regular fugues that we have found upon one subject, or of two subjects carried on at the same time, from the beginning of a movement to the end. *Ricercari* and *fantasie* preceded sonatas and concertos, and were the first compositions expressly made for instruments, after the invention of counterpoint. The fugues of Frescobaldi have great merit, if we consider the state of instrumental music at the time they were produced: the subjects are marked, the harmony pure, and the style chaste and clear. Frescobaldi's masterly and pleasing fugues added new dignity and attraction to the organ; they were soon imitated all over Europe, and wherever there was an organ and an organist possessed of hand and head capable of emulating a style so suitable to the genius of that instrument. It is not said in the title page for what instruments the several parts were designed; but, as the author was a great organ player, we make no doubt but that they were first produced by and for that instrument, as all the four parts are so compact and closely connected, that they are still within the grasp of the two hands. Notwithstanding many of these fugues are upon two, three, and even four, subjects, and every learned artifice of inversion, augmentation, diminution, and moto contrario, is used, he has had the dexterity to avoid confusion. The "*Sonate d'Intavolatura di Cimbalo ed Organo partite di diverse Arie e Corrente, Ballati, Ciaccone, Passacagli di Frescobaldi*," published at Rome in 1637, upon six lines for the right hand, and eight for the left, are very full, and of difficult execution. These pieces, being embellished with the fashionable divisions and graces of the times, have suffered more by age than the *ricercari*, which have all the simplicity of vocal fugues in the church-style. But even in his variations on old airs, we find more taste and passages which have stood their ground, than in any other harpsichord-music of the same period.

Our Bird, Dr. Bull, and Giles Fornaby, seem to have been the greatest organ-players in Europe during the sixteenth century, and the beginning of the next, till Frescobaldi introduced a superior style of treating the organ,



divested of rapid and frivolous divisions which disgrace that most noble and comprehensive of all instruments. Indeed the fugues of Frescobaldi are worked with such genius and learning as have never been surpassed, unless by those of Sebastian Bach, and Handel, which seem to include every perfection of which this ingenious and elaborate species of composition is capable. And, if we except these fugues, all instrumental music, particularly that for keyed instruments, seems to have been in a very rude state at this time throughout Europe. It was dry, difficult, unaccented, and inlpid.

The musical writers and composers who acquired fame in England during the seventeenth century, were, Dr. Nathanael Giles, Thomas Tomkins, and his son of the same name; Elway Bevin, Orlando Gibbons, Dr. William Child, Adrian Batten, Martin Pierſon, William Lawes, Henry Lawes, Dr. John Wilſon, John Hilton, John Playford, Capt. Henry Cook, Pelham Humphrey, John Blow, William Turner, Dr. Chriſtopher Gibbons, Benjamin Rogers, and Henry Purcell. Of theſe, Orlando Gibbons, Pelham Humphrey, and Henry Purcell, far excelled the reſt.

About the end of the reign of James I. a music-lecture or profeſſorſhip was founded in the univerſity of Oxford by Dr. William Hychin.

In the reign of Charles I. a charter was granted to the muſicians of Weſtmiſter, incorporating them, as the king's muſicians, into a body politic, with powers to proſecute and fine all who, except themſelves, ſhould "at-tempt to make any benefit or advantage of muſic in England or Wales;" powers which in the ſubſequent reign were put in execution.

About the end of the reign of Charles II. a paſſion ſeems to have been excited in England for the *violin*, and for pieces expreſſly compoſed for it in the Italian manner. This may be pronounced the moſt powerful, the moſt perfect, and the moſt uſeful, inſtrument that has ever been invented. It is in the power of the performer on this ſovereign of the orchestra, to make the intonation of all keys equally perfect. We have not been able to trace its antiquity higher than the ſixteenth century. In the beginning of the ſeventeenth century it was hardly known to the Engliſh in ſhape or name; and, therefore, that ſuperior power of expreſſing almoſt all that a human voice can produce, except the articulation of words, ſeemed at this time ſo utterly impoſſible, that it was not thought a gentleman's inſtrument, or one that ſhould be admitted into good company. Viols of various ſizes, with ſix ſtrings, and fretted like the guitar, began indeed to be admitted into chamber-concerts; for, when the performance was public, theſe inſtruments were too feeble for the obtuſe organs of our Gothic anceſtors; and the low ſtate of our regal muſic in the time of Henry VIII. 1530, may be gathered from the accounts given in Hall's and Holingſhead's Chronicles of a maſque at cardinal Wolſey's palace, Whitehall, where the king was entertained with "a concert of drums and fifes." But this was ſoft muſic compared with that of his heroic daughter Elizabeth, who, according to Henſxner, uſed to be regaled during dinner "with twelve trumpets and two kettle-drums; which, together with fifes, cornets, and ſide-drums, made the hall ring for half an hour together." *Itinerarium*, edit. 1757, Strawberry-Hill.

It has long been a diſpute among the learned, whether the violin, or any inſtrument of that kind, as now played with a bow, was known to the ancients. The little figure of Apollo, playing on a kind of violin, with ſomething like a bow, in the grand duke's tribuna at Florence, which Mr. Addiſon and others ſuppoſed to be antique, has been proved to be modern by the abbé Winckelmann and Mr. Mings. So that, as this was the only piece of ſculpture reputed ancient, in which any thing like a bow could be found, nothing more remains to be diſcuſſed relative to that point. With reſpect to an inſtrument with a double neck, beſides that on the broken obeliſk at Rome, and

one from a ſepulchral grotto in the ancient city of Tarquinia, there is an antique painting in the collection of William Locke, eſq. which conſiſts of a ſingle figure, ſuppoſed to be a muſe, with an inſtrument nearly in the form of a modern violin, but the neck is much longer, and neither bow nor plectrum are diſcoverable near it. This, as Dr. Burney apprehends, may have been a *chelys*, which was a ſpecies of guitar, either thrummed by the fingers or twanged with a quill. The ancients had, indeed, inſtead of a bow, the *plectrum*; but, in all the representations which painting and ſculpture have preſerved of this implement, it appears too clumſy to produce from the ſtrings tones that had either the ſweetneſs or brilliancy of ſuch as are drawn from them by means of the bow or quill. Dr. Burney ſuppoſes, though it is repreſented ſo maſſive, that it was a quill, or piece of ivory in imitation of one, rather than a ſtick or blunt piece of wood or ivory; and, indeed, Virgil tells us, *Æn. vi. 647*, that it was made of ivory.

The violin ſeems to have been brought into favour at the court of France before any honourable mention is made of it elſewhere, by the arrival of Baltazarini, a great performer on that inſtrument; who, at the head of a band of violin-players, was ſent from Piedmont by marſhal Briſſac to Catharine de Medicis, and appointed by that princeſs her firſt valet de chambre and ſuperintendent of her muſic. Galilei (*Dial. p. 147.*) ſays, that "both the violin and baſs, or violoncello, were invented by the Italians, perhaps by the Neapolitans;" and we are unable to confute that opinion. Corelli's violin, long in the poſſeſſion of Giardini, was made in 1578, and the caſe painted by Annibal Caracci, probably ſeveral years after the violin was finiſhed, at which time that painter was but eight years old. Montaigne, who was at Verona in 1580, ſays that "there were organs and violins to accompany the maſs in the great church."

The reſtoration of monarchy and epiſcopacy in England ſeems to have been not only favourable to ſacred muſic, but ſecular; for it may be aſcribed to the particular pleaſure which king Charles II. received from the gay and ſprightly ſound of the violin, that this inſtrument was introduced at court, and the houſes of the nobility and gentry for any other purpoſe than country-dances, and feſtive mirth. Hitherto there ſeem to have been no public concerts; and in the muſic of the chamber, in the performance of *fancies* on inſtruments, which had taken place of vocal madrigals and motets, the violin had no admiſſion, the whole buſineſs having been done by viols. After Charles had, in imitation of Louis XIV. eſtabliſhed a band of twenty-four violins, tenors, and baſſes, inſtead of the viols, lutes, and cornets, of which the court-band uſed to conſiſt, the violin-family began to riſe in reputation, and had an honourable place aſſigned it in the muſic of the court, the theatres, and the chamber; and the ſucceſſion of performers and compositions with which the nation was afterwards ſupplied from Italy and elſewhere, ſtimulated the practice and eſtabliſhed the character of that claſs of inſtruments, which have ever ſince been univerſally acknowledged to be the pillars of a well-ordered orchestra.

Prior to the year 1600, there was little other muſic except maſſes and madrigals, the two principal divisions of ſacred and ſecular muſic; but from that time to the preſent dramatic muſic becomes the chief object of attention. The muſic of the church and of the chamber continued indeed to be cultivated in Italy with diligence, and in a learned and elaborate ſtyle, till near the middle of the century; yet a revolution in favour of melody and expreſſion was preparing, even in ſacred muſic, by the ſucceſs of dramatic composition, conſiſting of recitation and melodies for a ſingle voice. Such melodies began now to be preferred to muſic of many parts; in which canons, fugues, and full harmony, had been the productions which chiefly employed the maſter's ſtudy and the hearer's attention.



So late as the beginning of the eighteenth century, according to Riccoboni, the performers in the operas of Germany, particularly at Hamburg, "were all tradesmen or handicrafts. Your shoemaker (says he) was often the first performer on the stage; and you might have bought fruit and sweatmeats of the same girls whom the night before you had seen in the characters of Armida or Semiramis." Soon, however, the German opera arose to a more respectable situation; and even during the seventeenth century many eminent composers flourished in that country.

The list of great musicians which France produced during the early part of the same century is not numerous. Music seems to have been but little cultivated in that country, till the operas of Lulli, under the powerful patronage of Louis XIV. excited public attention. The favourite singing-master and composer of France, about the middle of the seventeenth century, was Michael Lambert. John Baptist Lulli, soon after this time; rose from the rank of a menial servant to fame, opulence, and nobility, by his skill in musical compositions. The celebrated singer La Rochois was taught singing and acting by Lulli.

The English musician whom we last mentioned was the celebrated Purcell. After his time the chief composers for the church were Clarke, Dr. Holden, Dr. Creighton, Tucker, Aldrich, Golwin, Weldon, Dr. Crofts, Dr. Greene, Boyce, and Nares; to whom may be added John Stanley, who attained high proficiency in music, although from two years old totally deprived of sight.

The annals of modern music have hitherto furnished no event so important to the progress of the art as the invention of *recitative*, or dramatic melody; a style of music which resembles the manner of the ancient rhapsodists. See CAVALIERI, vol. iii. p. 921.

As the Orfeo of Politiano was certainly the first attempt at the musical drama now called an *opera*, which was afterwards perfected by Apostolo Zeno and Metastasio, we shall give the reader a sketch of the fable. To this drama there is an argument in verse. The piece is in five acts. Aristæus, a shepherd, the son of Apollo, loved Eurydice, the wife of Orpheus, in so violent a manner, that he pursued her in the fields; and in her flight from him she was bitten by a serpent, of which she died. Orpheus, by singing, so softened the infernals, that they suffered her to depart, on condition that he would not look behind him. But, not obeying this injunction, she was forced back to hell. Upon his great grief, and resolution, never to love another female, the Thracian women tore him to pieces.

That no musical dramas, similar to those that were afterwards known by the names of operas and oratorios, had existence in Italy before the beginning of the seventeenth century, seems certain by no mention being made of them in the ample list given by Angelo Ingegneri, 1598, of all that were then known, in his discourse on the representation of dramatic fables and poetry, where he treats of *tragedie, comedie, pastorali, piscatorie, boschereccie*, &c. all declaimed entirely, except the choruses, which seem to have consisted of odes or madrigals, set to music in parts. Music is the *first* consideration in operas and oratorios; but this author says, at the end of his book, "I now come to music, the *third* and *last* part of dramatic representations, which, in comedies and pastorals without choruses, will be used at pleasure, in interludes between the acts, to relieve the spectators, whose minds may be fatigued by the attention they have bestowed on the fable." We are often told, however, of musical dramas performed at Rome and Venice, long before this period; and every writer on the subject informs us, that Sulpitius, in his dedication of Vitruvius, speaks of a tragedy that was recited and sung at Rome, under the auspices of cardinal Riario, in 1480; that Alfonso della Viola set a drama to music, in 1560, for the court of Ferrara; and that at Venice there was an opera performed for the entertainment of Henry III. of France, at his return from Poland, on the death of his brother Charles IX. in 1574,

which was set by the famous Zarlino. These, and more, have been confounded by father Meneffrier with the musical dramas of later times, after the invention of recitative, which alone should distinguish the opera and oratorio from every other species of theatrical exhibition; but these early attempts at singing were no more dramatic than a mass, service, full anthem, or madrigal, would be if sung on a stage. Indeed some of the dramas, which preceded the year 1600, had choruses, and intermezzi in measured music, and incidental songs, like our masques in the reigns of queen Elizabeth, and James I. in which, however, the dialogue was all spoken.

Three Florentine noblemen, Giovanni Bardi count of Verona, Pietro Strozzi, and Jacopo Corfi, of good taste in literature, being discontented with every former attempt at perfecting dramatic poetry and exhibitions, determined to unite the best lyric poet with the best musician of their time; and therefore chose Ottavio Rinuccini and Jacopo Peri, their countrymen, to write and set to music the drama of *Dafne*, which was performed in the house of signor Corfi, in 1597, with great applause; and this seems the true era whence the opera, or drama, *wholly set to music*, and in which the dialogue was neither sung in measure, nor declaimed without music, but *recited* in simple musical tones, which amounted not to singing, and yet was different from speech, should be dated. After this successful experiment, Rinuccini wrote *Euridice* and *Arianna*, two other dramas, for the same kind of music.

Peri, in his preface, after enumerating the great personages who were present at the representation of the musical drama of *Euridice* at Florence in 1600, and the eminent musicians to whom his music has been shown, tells us, that it was sung by the most excellent performers of the time; among whom were signor Francesco Rasi, a nobleman of Arezzo, who represented the part of Aminto; signor Brandi, Arcetro; and signor Melchior Palantrotto, Pluto. He then tells us, that "behind the scenes, signor Jacopo Corfi played the harpsichord; Don Garzia Montalvo the *chitarone*, or large guitar; Messer Giovambatista dal Violino the *lira grande*, or viol da gamba; and Messer Giovanni Lapi a large lute." These four seem to have composed the whole band. For, though he celebrates the performance of Giovambatista Jacomelli on the violin, neither he, nor any one else, played on that instrument at the exhibition. He concludes his account of this drama by owning that some parts of it were composed by Giulio Caccini, detto Romano, "whose great merit was known to the whole world," because it was to be sung by persons dependent on him; by which he probably means to say, that they were his scholars. He boasts of having *opened the road* for others, by his essays at dramatic music.

Monteverde set Rinuccini's *Arianna* for the court of Mantua, in 1606; the words only were then printed, and reprinted several times after. This opera was performed at Venice, 1640, to Monteverde's composition, and the words again reprinted; but whether the music was ever published, we know not.

In a Discourse by Pietro della Valle on the Music of his own time, addressed by that celebrated traveller to Lelio Guidiccione 1640, and published in the second volume of the works of Battista Doni, at Florence, 1763, there is an interesting, clear, and admirable, account of the state of music in Italy, but particularly at Rome, during the beginning of the seventeenth century. We shall transcribe his account of the manner in which the first opera, or musical drama, was exhibited at Rome, which is extremely amusing and curious. "Though no more than five voices or five instruments were employed, the exact number which an ambulant cart could contain, yet these afforded great variety: as, besides the dialogue of single voices, sometimes two or three, and at last all the five, sang together, which had an admirable effect. The music of this piece, as may be seen in the copies of it that were afterwards printed, though dramatic, was not all in simple recitative, which would have been tiresome; but ornamented with beautiful passages, and movements in measure,



measure, without deviating however from the true theatrical style; on which account it pleased extremely, as was manifest from the prodigious concourse of people it drew after it, who, so far from being tired, heard it performed five or six several times; there were some even who continued to follow our cart to ten or twelve different places where it stopt, and who never quitted us as long as we remained in the street, which was from four o'clock in the evening till after midnight."

This narration seems to furnish a curious circumstance to the history of the stage, which is, that the first opera, or musical drama, performed in modern Rome, like the first tragedy in ancient Greece, was exhibited *in a cart*. It has been imagined by many of the learned, that the recitative in modern operas is a revival of that species of *melos* in which ancient dramas were sung; and here the *moveable stage* on which it was performed, like that used by Theſpis at Athens, furnishes another resemblance.

What follows is extremely curious and satisfactory concerning a delicate point of musical history; which is the first establishment of *evirati* in the pope's chapel, and the use of them in early operas.

It was about the year 1600, or little earlier, that eunuchs were first employed for singing in Italy. There seem to have been no *singing* eunuchs in ancient times, unless the galli or archigalli, priests of Cybele, were such. Castration has, however, at all times been practised in eastern countries for the purpose of furnishing to tyrannic jealousy guards of female chastity; but never, so far as modern writers on the subject have discovered, merely to preserve the voice, till about the end of the sixteenth century.

At Rome, the first public theatre opened for the exhibition of musical dramas, in modern times, was the Torra de Nona, where in 1671 *Giafone* was performed. In 1679, the opera of *Due Amore*, set by the famous organist Bernardo Pasquini, was represented at the Sala de Signori Capranica; a theatre which still subsists. In the year 1680, *L'Onesta negl'Amore* was exhibited; the first dramatic composition of the elegant, profound, and original, Alessandro Scarlatti.

The inhabitants of Venice cultivated and encouraged the musical drama with more zeal and diligence than the rest of Italy, during the end of the seventeenth and beginning of the eighteenth century; yet the opera was not established at Venice before the year 1637. In that year the first regular drama was performed. It was *Andromeda*.

In 1680 the opera of *Berenice* was exhibited at Padua with such astonishing splendour as to merit notice. There were choruses of 100 virgins, 100 soldiers, 100 horsemen in iron armour, 40 cornets of horse, 6 trumpeters on horseback, 6 drummers, 6 ensigns, 6 sackbuts, 6 great flutes, 6 minstrels playing on Turkish instruments, 6 others on octave flutes, 6 pages, 3 sergeants, 6 cymbalists. There were 12 huntsmen, 12 grooms, 6 coachmen for the triumph, 6 others for the procession, 2 lions led by two Turks, 2 elephants by two others, *Berenice's* triumphal car drawn by 4 horses, 6 other cars with prisoners and spoils drawn by 12 horses, 6 coaches. Among the scenes and representations in the first act were, a vast plain with two triumphal arches, another plain with pavillions and tents, and a forest for the chase. In act third, the royal dressing-room completely furnished, stables with 100 live horses, the portico adorned with tapestry, and a stupendous palace in perspective. At the end of the first act were representations of every kind of chase, wild boar, stag, deer, bears. At the end of the third act, an enormous globe, descending as from the sky, divided itself into other globes suspended in the air, and ornamented with emblematical figures of time, fame, honour, &c.

Thus we may perceive that, in the first operas, music was the principal object, with mythological characters in the fable; and that machinery next took the lead, with perspective and decoration.

It was near fifty years, from the time of Della Valle, before regular airs had admission in these early musical dramas. At first they were generally accompanied by the finger himself on the violin, harp, or violoncello; but, during the mythological passion, and the rage for machinery, the only wish of the impresario was to dazzle the eyes and stun the ears of the audience. Gods and devils, heroes and heroines, and at length men and women as history represents them, were brought on the stage. These several reforms and changes of taste in the public, led at length to Apostolo Zeno and Metastasio; when the exquisite airs of Leo, Vinci, and Pergolesi, with the great vocal talents of Piffocci, Nicolini, Farinelli, Faustina, and Cuzzoni, exalted the lyric stage to its highest degree of public favour.

The vocal compositions of Vinci form an era in dramatic music, as he was the first among his countrymen who, after the invention of recitative, seems to have occasioned any considerable revolution in the musical drama. The airs in the first operas were few and simple; but, as singing improved, and orchestras became more crowded, the voice-parts were more laboured, and the accompaniments more complicated. In process of time, however, poetry seems to have suffered as much as ever from the pedantry of musicians, who forgot that the true characteristic of dramatic music is clearness; and that, sound being the vehicle of poetry and colouring of passion, the instant the business of the drama is forgotten, and the words are unintelligible, music is so totally separated from poetry, that it becomes merely instrumental, and the voice-part may as well be performed by a flute or violin, in the orchestra, as by one of the characters of the piece on the stage. Vinci seems to have been the first opera-composer who saw this absurdity, and, without degrading his art, rendered it the friend, though not the slave, to poetry, by simplifying and polishing melody, and calling the attention of the audience chiefly to the voice-part, by disentangling it from fugue, complication, and laboured contrivance. In 1726, he set Metastasio's *Didone Abandonata*, which established his reputation; for in this exquisite drama, not only the airs were greatly applauded, but the recitative, particularly in the last act, which, being chiefly accompanied, had such an effect, that, according to count Algarotti, "Virgil himself would have been pleased to hear a composition so animated and so terrible, in which the heart and soul were at once assailed by all the powers of music." *Saggio sopra l'Opera in Musica*.

We shall mention the rest of this pleasing and intelligent composer's operas, the airs of which long served as models to other masters, and are not yet become either ungraceful or inelegant. In 1727, he composed *Gimondo, Re di Polonia*; in 1728, *Catone in Utica*; in 1729, *Semiramide Riconosciuta*; and in 1730, *Alessandro nell'Indie*, and *Artaserse*; all for the theatres in Rome. The celebrated air at the end of the first act of *Artaserse*, *Vo soleando un mar crudele*, originally composed for Carestini, is well known, and is perhaps the only production of Vinci by which his merits have been favourably estimated in England. In the printed book of the words, Vinci is called "Pro-vice maestro della Real Capella di Napoli." We have been able to find no more of his works after this period; so that he must either have begun late, or been cut off early in life, as his great and durable renown seems to have been acquired in the short space of six years of his existence; namely, from 1724 to 1730.

The word *opera* seems to have been familiar to English poets from the beginning of the last century. *Stilo recitativo*, a recent innovation even in Italy, is mentioned by Ben Johnson so early as 1617. See LANIERE, vol. xi. p. 208. From this time it was used in masques, occasionally in plays, and in cantatas, before a regular drama wholly set to music was attempted. By the united abilities of Quinault and Lulli, the opera in France had arisen to high favour. This circumstance afforded encouragement to several



several attempts at dramatic music in England, by sir William Davenant and others, before the music, language, or performers, of Italy, were employed on our stage. Pieces styled *dramatic operas*, preceded the Italian opera on the stage of England. These were written in English, and exhibited with a profuse decoration of scenery and habits, and with the best singers and dancers that could be procured: Pŷche and Circe are entertainments of this kind: the Tempest and Macbeth were acted with the same accompaniments.

During the seventeenth century, whatever attempts were made in musical drama, the language sung was always English. About the end of that century, however, Italian singing began to be encouraged, and vocal as well as instrumental musicians from that country began to appear in London.

The first musical drama, performed wholly after the Italian manner, in recitative for the dialogue or narrative parts, and measured melody for the airs, was *Arfinœ* Queen of Cyprus, translated from an Italian opera of the same name, written by Stanzani of Bologna. The English version of this opera was set to music by Thomas Clayton, one of the royal band, in the reign of William and Mary. The singers were all English: Messrs. Hughes, Leveredge, and Cook; Mrs. Tofts, Mrs. Crofs, and Mrs. Lyndsey. The translation of *Arfinœ*, and the music to which it is set, are execrable; yet such is the charm of novelty, that this miserable performance, deserving neither the name of a drama by its poetry, nor of an opera by its music, sustained twenty-four representations, and the second year eleven.

Operas, notwithstanding their deficiencies in poetry, music, and performance, (no foreign composer or eminent singer having yet arrived,) became so formidable to our actors at the theatres, that it appears from the *Daily Courant*, 14th January 1707, a subscription was opened "for the encouragement of the comedians acting in the Haymarket, and to enable them to keep the diversion of plays under a separate interest from operas."

Mr. Addison's opera of *Rosamond* appeared about this time; but the music set by Clayton is so contemptible, that the merit of the poetry, however great, could not of itself long support the piece. The choice of so mean a composer as Clayton, and Mr. Addison's partiality to his abilities, betray a want of musical taste in that elegant author.

The first truly great singer who appeared on the stage of Great Britain was Cav. Nicolino Grimaldi, commonly known by the name of *Nicolini*. He was a Neapolitan; and, though an harmonious singer indeed, was still more eminent as an actor. In the *Tatler*, N<sup>o</sup> 115. the elegance and propriety of his action are particularly described. Recently before his appearance, Valentini Urbani, and a female singer called the *Baroness*, arrived. *Margarita de l'Epine*, who afterwards married Dr. Pepusch, had been in this country some time before.

The first opera performed wholly in Italian, and by Italian singers, was *Almahide*. As at present, so at that time, operas were generally performed twice a-week.

Dr. Crotch calls the productions of the 15th, 16th, and 17th, centuries, *ancient music*. We are now, therefore, arrived at the æra of *modern music*. We would rather call it the æra of *Handel*.

The year 1710 is distinguished by the arrival of George Frederic Handel. This great musician had been in the service of the elector of Hanover, and came first to England on a visit of curiosity. His fame had reached this country before he himself arrived in it; and Aaron Hill, then in the direction of the Haymarket theatre, instantly applied to him to compose an opera. It was *Rinaldo*; the admirable music of which he produced entirely in a fortnight. Soon after this period appeared, for the first time as an opera-singer, the celebrated Mrs. Anastasia Robinson. Mrs. Robinson, who was the daughter of a portrait-painter, had made her first public exhibitions in

the concerts at York-buildings; and acquired so much public favour, that her father was encouraged to take a house in Golden-square, for the purpose of establishing weekly concerts and assemblies, in the manner of the Italian *Conversazioni*, which became the resort of the most polite audiences. Soon after, Mrs. Robinson accepted an engagement at the opera, where her salary is said to have been 1000*l.* and her other emoluments equal to that sum. She quitted the stage in consequence of her marriage with the earl of Peterborough; as to which, see vol. xv. p. 788. The eminent virtues and accomplishments of this lady, who died at the age of eighty-eight, entitled her to be mentioned even in a compend too short for biography.

The conducting the opera having been found to be more expensive than profitable, it was entirely suspended from 1717 till 1720. when a fund of 50,000*l.* for supporting and carrying it on was subscribed by the first personages of the kingdom. The subscribers, of whom king George I. was for 1000*l.* were formed into a society, and named the Royal Academy of Music. Handel was commissioned to engage the performers. For that purpose he went to Dresden, where Italian operas were at that performed in the most splendid manner at the court of Augustus elector of Saxony, then king of Poland. Here Handel engaged Senesino-Berenstadt, Boscche, and the Durantanti.

In the year 1723, the celebrated *Francesca Cuzzoni* appeared as a first-rate singer: and two years afterwards arrived her distinguished rival, *Faustina Bordon*. In a cantabile air, though the notes Cuzzoni added were few, she never lost an opportunity of enriching the cantilena with the most beautiful embellishments. Her shake was perfect. She possessed a creative fancy; and she enjoyed the power of occasionally accelerating and retarding the measure in the most artificial and able manner, by what is in Italy called *tempo rubato*. Her high notes were unrivalled in clearness and sweetness. Her intonations were so just and so fixed, that it seemed as if she had not the power to sing out of tune. *Faustina Bordon*, wife of the celebrated Saxon composer Hasse, invented a new kind of singing, by running divisions, with a neatness and velocity which astonished all who heard her. By taking her breath imperceptibly, she had the art of sustaining a note apparently longer than any other singer. Her beats and trills were strong and rapid; her intonation perfect. Her professional perfections were enhanced by a beautiful face, fine symmetry of figure, and a countenance and gesture on the stage which indicated an entire intelligence and possession of the several parts allotted to her. These two angelic performers excited so signally the attention of the public, that a party-spirit between the abettors of the one and of the other was formed, as violent and as inveterate almost as any of those that had ever occurred relative to matters either theological or political; yet so distinct were their styles of singing, so different their talents, that the praise of the one was no reproach to the other.

In less than seven years, the whole 50,000*l.* subscribed by the Royal Academy, besides the produce of admission to non-subscribers, was expended, and the governor and directors of the society relinquished the idea of continuing their engagements; consequently, at the close of the season of 1727, the whole band of singers dispersed. The next year we find Senesino, Faustina, Balde, Cuzzoni, Nicolini, Farinelli, and Boscche, at Venice.

Handel, however, at his own risk, after a suspension of about a twelvemonth, determined to re-commence the opera; and accordingly engaged a band of performers entirely new. These were signior Bernacchi, signora Merighi, signora Strada, signior Anibale Pio Fabri, his wife, signora Bertoldi, and John Godfrid Reimischneider.

The sacred musical drama, or *oratorio*, was invented early in the fourteenth century. Every nation in Europe seems first to have had recourse to religious subjects for dramatic

dramatic exhibitions. The oratorios had been common in Italy during the last century. They had never been publicly introduced in England, till Handel, stimulated by the rivalry of other adventurers, exhibited in 1732 his oratorios of *Esther*, and of *Acis and Galatea*, the last of which he had composed twelve years before for the duke of Chandos's chapel at Cannons. The most formidable opposition which Handel met with in his conduct of the Italian opera, was a new theatre for exhibiting these operas, opened by subscription in Lincoln's-inn-fields, under the conduct of Nicola Porpora, a respectable composer. A difference having occurred between Handel and Senesino; Senesino had for some time deserted the Haymarket, where Handel managed, and was now engaged at the rival theatre of Lincoln's-inn-fields. To supply the place of Senesino, Handel brought over Giovanni Carestini, a singer of the most extensive powers. His voice was at first a powerful and clear soprano: afterwards it changed into the fullest, finest, deepest, counter-tenor that has perhaps ever been heard. Carestini's person was tall, beautiful, and majestic. He rendered every thing he sang interesting by energy, taste, and judicious embellishment. In the execution of difficult divisions from the chest, his manner was articulate and admirable. It was the opinion of Haſſe, as well as other eminent professors, that whoever had not heard Carestini, was unacquainted with the most perfect style of singing. The opera under the direction of Porpora was removed to the Haymarket, which Handel had left. Handel occupied the theatre of Lincoln's-inn-fields; but his rivals now acquired a vast advantage of attraction, by the accession of Carlo Broschi, called *Farinelli*, to their party, who at this time arrived. This renowned singer seems to have transcended the limits of all anterior vocal excellence. No vocal performer of the eighteenth century has been so unanimously allowed to possess an uncommon power, sweetness, extent, and agility, of voice, as Farinelli. Nicolini, Senesino, and Carestini, gratified the eye as much by the dignity, grace, and propriety of their action and deportment, as the ear by the judicious use of a few notes within the limits of a small compass of voice; but Farinelli, without the assistance of significant gestures or graceful attitudes, enchanted and astonished his hearers, by the force, extent, and mellifluous tones, of the mere organ, when he had nothing to execute, articulate, or express. Though during the time of singing he was as motionless as a statue, his voice was so active, that no intervals were too close, too wide, or too rapid, for his execution.

Handel, having lost a great part of his fortune by the opera, was under the necessity of trying the public gratitude in a benefit, which was not disgraced by the event. The theatre, for the honour of the nation, was so crowded, that he is said to have cleared 800*l*. After a fruitless attempt by Heidegger, the coadjutor of Handel in the conduct of the opera, and patentee of the King's Theatre in the Haymarket, to procure a subscription for continuing it, it was found necessary to give up the undertaking.

It was about this time that the statue of Handel was erected in Vauxhall, at the expense of Mr. Tyers, proprietor of those gardens. It has often been remarked lately, that Vauxhall opens too soon and shuts too soon. It commonly opens about the 4th of June, before the evenings have become warm. But, about the year 1712, it used to open on the 1st of May. Are the seasons grown colder, or more backward; or are we become more tender and effeminate? At the time we speak of, however, (*Spectator*, N<sup>o</sup> 383.) no mention is made of music or lamps; the refreshments were mead, Burton ale, and hung beef. Sir Roger de Coverley observed, that he wished there were more nightingales and fewer strumpets; the same remark might be made now, after the lapse of a full century; to which we may add, that the strumpets, who at that time wore masks, are now bare-faced enough.

Vauxhall had no vocal entertainments till the year 1745, when Mrs. Arne, Mr. Lowe, and Mr. Reinhold, sen. were engaged. See the article *LAMBETH*, vol. xii. p. 103.

Ranelagh was planned by Lacy and Garrick, patentees of Drury-lane, about the year 1743 or 4. The performances at first were in a morning; and oratorio-chorusses chiefly furnished the bill of fare. Afterwards the doors opened at 6 in the evening, the performances began at 8, and closed at 10.

Marybone Gardens flourished from the year 1740 till about 1777. See the article *LONDON*, vol. xiii. p. 577.

The arrival of Giardini in London (in the year 1750) forms a memorable æra in the history of music in England. His powers on the violin were unequalled. He was a native of Piedmont; and when a boy was a chorister in the Duomo at Milan, under Paladini, of whom he learned singing, the harpsichord, and composition; but, having previously manifested a disposition and partiality for the violin, his father recalled him to Turin, in order to receive instructions on that instrument of the famous Somis. Though his preference of the violin, upon which he became the greatest performer in Europe, seems a lucky circumstance, yet he had talents which would have made him a superior harpsichord-player, had he continued to practise that instrument; but he used to say, that he was perfectly cured of that vanity at Paris, by the performance of Mad. de St. Maur, a scholar of Rameau, who played in such a manner as not only made him ashamed of his own performance, but determined him never to touch the instrument again in serious practice. He went to Rome early in his life, and afterwards to Naples, where, having obtained a place among the ripienos in the opera-orchestra, he used to flourish and change passages much more frequently than he ought to have done. "However," says Giardini, "I acquired great reputation among the ignorant for my impertinence; yet one night, during the opera, Jomelli, who had composed it, came into the orchestra; and, seating himself close by me, I determined to give the maestro di capella a touch of my taste and execution; and, in the symphony to the next song, which was in a pathetic style, I gave loose to my fingers and fancy; for which I was rewarded by the composer with a violent slap in the face; which," adds Giardini, "was the best lesson I ever received from a great master in my life." Jomelli, after this, was however very kind, in a different way, to this young and wonderful musician.

Giardini came to England in the spring of 1750. His first public performance in London was at a benefit-concert for old Cuzzoni, who sung in it with a thin cracked voice, which almost frightened out of the little theatre in the Haymarket the sons of those who had perhaps heard her at the great theatre in the same street with ecstasy. But when Giardini played a solo and concerto, though there was very little company, the applause was so loud, long, and furious, as nothing but that bestowed on Garrick had ever equalled. We had met him the night before (says Burney,) at a private concert, with Guadagni and Frasi, at the house of Naphthali Franks, esq. who was himself one of the best dilettanti performers on the violin at that time; and we were all equally surprised and delighted with the various powers of Giardini at so early a period of his life; when, besides solos of his own composition of the most brilliant kind, he played several of Tartini's, in manuscript, at sight, and at five or six feet distance from the notes, as well as if he had never practised any thing else. "His tone; bow; execution; graceful carriage of himself and his instrument; performing a manuscript-piece of a young composer in the room, he declared that Giardini had so improved it as to make it better than he intended, or had imagined it to be in the warm moments of conception; and lastly, playing variations extempore, during half an hour, upon a new but extraordinary kind of birth-day minuet, which accidentally lay on the harpsichord—all this threw into



the utmost astonishment the whole company, who had never been accustomed to hear better performers than Festing, Brown, and Collet. Of his academy, scholars, manner of leading at the opera and oratorio, performance in private concerts, compositions vocal and instrumental, we shall say nothing here, lest our praise should be too much for others, and too little for ourselves."

He soon got possession of all the posts of honour in this country. He was engaged and caressed at most of the private concerts of the principal nobility, gentry, and foreign ministers; at the Castle and King's-Arms concert in the city; and in 1754 he was placed at the head of the opera-band; in which he introduced a new discipline, and a new style of playing, much superior in itself, and more congenial with the poetry and music of Italy, than the languid manner of his predecessor Festing; who, except one or two seasons, when Veracini was at the head of the orchestra, had led the opera-band, from the time that Castrucci was dismissed, till the arrival of Mingotti.

In 1756, on the failure and flight of the *impresario*, or undertaker of the opera, the Mingotti and Giardini joined their interests, and acquired for a while the sovereignty of the opera kingdom; by which gratification of their ambition, these two great performers were soon brought to the brink of ruin, as others had been before them. In 1762, on Mattei quitting the management of the opera, in spite of former misadventures, Giardini and Mingotti again resumed the reins of opera-government. But, after struggling two years against the stream, during the decline of Mingotti's favour, and after an inauspicious season, at the end of 1763, Giardini and his partner again abdicated their thrones. From this period, Giardini, always hovering over his former lyric kingdom, without the power of invading it, or bringing about a restoration, was forced to content himself with teaching ladies of rank and fashion to sing, and the produce of a great annual benefit. He continued here, unrivalled as a leader, a solo-player, and a composer for his instrument, still augmenting the importance of his instrument and our national partiality for the taste of his country, till the admirable productions and great performers of Germany began to form a Teutonic interest and Germanic body here, which, before Giardini's departure from London, became very formidable rivals to him and his Roman legion. At the end of 1784, he went to Italy, and resided a considerable time at Naples, with sir William Hamilton, one of his first scholars on the violin after his arrival in England. Remaining on the continent till the summer of 1789, Giardini returned to this country, bringing with him a female pupil and her whole family, and attempted a burletta-opera at the little theatre in the Haymarket, while the great opera-house, which had been burned down, was rebuilding; but, his *prima donna* not being approved, their speculation failed, and he had her and her whole family on his hands. During his absence, the public had learned to do without him, and reconciled themselves to his loss. His health, hand, and eyes, were impaired; he was dropsical, his legs were of an enormous size, and little of his former superiority on his instrument remained, but his fine tone. He composed quartets that pleased very much, but in which he never played any other part in public than the tenor. The style of music was changed; he printed many of his old compositions which used to please; but now could gain neither purchasers nor hearers; so that, about the year 1793, he went to Petersburg with his burletta troop; which seems to have pleased as little there and at Moscow as in London; and he is said to have died in this last city in great wretchedness and poverty!

We must now go back to the year 1750, when a comic opera, called *Il Filosofo di Campagna*, composed by Galuppi, was exhibited, which surpassed in musical merit all the comic operas performed in England till the *Buona Figliola*. Signora Paganini acquired such fame by the airs allotted to her in that piece, that the crowds at her benefit were beyond example: caps were lost, gowns torn in pieces,

and ladies in full dress, without servants or carriages, were obliged to walk home, amidst the merriment of the spectators in the streets.

In 1764, the arrival of Giovanni Manzoli marked a splendid era in the annals of musical drama, by conferring on the serious opera a degree of importance to which it had seldom arisen since its establishment in England. Manzoli's voice was the most powerful and voluminous soprano that had been heard since the time of Farinelli: his manner of singing was grand, and full of taste and dignity. At this time Tenducci, who had been in England some time before, and was now returned much improved, performed in the station of second man to Manzoli.

In 1769, Gaetano Guadagni made a great figure. He had been in this country early in life (1743), as serious man in a burletta-troop of singers. His voice was then a full and well-toned counter-tenor; but he sung wildly and carelessly. The excellence of his voice, however, attracted the notice of Handel, who assigned him the parts in his oratorios, the Messiah and Samson, which had been originally composed for Mrs. Cibber. He quitted London for the first time about 1753. The highest expectations of his abilities were raised by fame before his second arrival, at the time of which we treat. As an actor he seems to have had no equal on any stage in Europe. His figure was uncommonly elegant and noble; his countenance replete with beauty, intelligence, and dignity; his attitudes were full of grace and propriety. But, though his manner of singing was perfectly delicate, polished, and refined, his voice seemed at first to disappoint every hearer. Those, who remembered it when he was in England before, found it now comparatively thin and feeble; for he had changed it to a soprano, and extended its compass, from six or seven notes, to fourteen or fifteen. Let a fluid of six feet in depth (says Dr. Burney) be spread over more than double its usual surface, and it will necessarily be shallower, though of greater extent. The music he sang was the most simple imaginable; a few notes with frequent pauses, and opportunities of being liberated from the composer and the band, were all he required. In these effusions, seemingly extemporaneous, he displayed the native power of melody unaided by harmony or even by unisonous accompaniment. The pleasure he communicated proceeded principally from his artful manner of diminishing the tones of his voice, like the dying notes of the Æolian harp. Most other singers affect a swell; but Guadagni, after beginning a note with force, attenuated it so delicately that it possessed all the effect of extreme distance. During the season of 1770 and 1771, Tenducci was the immediate successor of Guadagni. This performer, who appeared in England first only as a singer of the second or third class, was during his residence in Scotland and Ireland so much improved as to be well received as first man, not only on the stage of London, but in all the great theatres of Italy.

In the first opera performed in 1773, appeared Miss Cecilia Davies, known in Italy by the name of *l'Ingleseina*. Miss Davies had the honour of being the first English woman who had ever been thought worthy of singing on any stage in Italy. She even performed with éclat the principal female characters on many of the great theatres of that country. Gabrielli only on the continent was said to surpass her. Her voice, though not of great volume, was clear and perfectly in tune; her shake was open and distinct, without the sluggishness of the French cadence. The flexibility of her throat rendered her execution equal to the most rapid divisions.

Next season introduced Venanzio Ravygini, a beautiful and animated young man; a composer as well as a singer. His voice was sweet, clear, flexible; in compass more than two octaves.

The season of 1775 and 76 was rendered memorable by the arrival of the celebrated *Caterina Gabrielli*, styled early in life *La Cuochetina*, being the daughter of a cardinal's cook



cook at Rome. She had, however, in her countenance and deportment no indications of low birth. Her manner and appearance depicted dignity and grace. So great was her reputation before her arrival in England for singing and for caprice, that the public, expecting perhaps in both too much, were unwilling to allow her due praise for her performance, and were apt to ascribe every thing she did to pride and insolence. Her voice, though exquisite, was not very powerful. Her chief excellence having been the neatness and rapidity of her execution, the surprise of the public must have been much diminished on hearing her after miss Davies, who sung many of the same songs in the same style, and with a neatness so nearly equal, that common hearers could distinguish no difference. The discriminating critic, however, might have discovered a superior sweetness in the natural tone of Gabrielli's voice, an elegance in the finishing of her musical periods or passages, an accent and precision in her divisions, superior not only to miss Davies, but to every other singer of her time. In slow movements her pathetic powers, like those in general of performers most renowned for agility, were not exquisitely touching.

About the time of which we have been treating, the proprietors of the Pantheon ventured to engage *Agujari* at the enormous salary of 100*l.* per night, for singing two songs only! *Lucrezia Agujari* was a truly wonderful performer. The lower part of her voice was full, round, and of excellent quality; its compass amazing. She had 100 octaves of fair natural voice, from A on the fifth line in the base to A on the sixth line in the treble, and beyond that *in alt* she had in early youth more than another octave. She has been heard to ascend to B*b* *in altissimo*. Her shake was open and perfect; her intonation true; her execution marked and rapid; the style of her singing, in the natural compass of her voice, grand and majestic.

In 1776 arrived Anna Pozzi, as successor to Gabrielli. She possessed a voice clear, sweet, and powerful; but her inexperience, both as an actress and as a singer, produced a contrast very unfavourable to her when compared with so celebrated a performer as Gabrielli. After that time, however, Pozzi, with more study and knowledge, became one of the best and most admired female singers in Italy.

After the departure of *Agujari* for the second and last time, the managers of the Pantheon engaged *Georgi* as her successor. Her voice was exquisitely fine, but totally uncultivated. She was afterwards employed as the first woman in the operas of the principal cities of Italy.

During the season of 1777 and 78, the principal singers at the opera in London were Francesco Roncaglia and Francesca Danze, afterwards madame Le Brun. Roncaglia possessed a sweet-toned voice; but of the three great requisites of a complete stage-singer, pathos, grace, and execution, which the Italians call *cantabile*, *graziosa*, and *bravura*, he could lay claim only to the second. His voice, a *voce de camera*, when confined to the *graziosa* in a room, left nothing to wish for. Danze had a voice well in tune, a good shake, great execution, prodigious compass, with great knowledge of music; yet the pleasure her performance imparted was not equal to these accomplishments. But her object was not so much pathos and grace, as to surprise by the imitation of the tone and difficulties of instruments.

This year *Gasparo Pacchierotti* appeared in London, whither his high reputation had penetrated long before. The natural tone of his voice was interesting, sweet, and pathetic. His compass downwards was great, with an ascent up to B*b*, and sometimes to C *in alt*. He possessed an unbounded fancy, and the power not only of executing the most difficult and refined passages, but of inventing embellishments entirely new. Ferdinando Bertoni, a well-known composer, came along with Pacchierotti to England.

About this time dancing became an important branch of the amusements of the opera-house. Mademoiselle Heinel, Vestris the younger, and mademoiselle Baccelli, had, during some years, delighted the audience at the opera; but, on the arrival of the elder Vestris, pleasure was exchanged for ecstasy. In the year 1781, Pacchierotti had by this time been so frequently heard, that his singing was no impediment to conversation; but, while the elder Vestris was on the stage, not a breath was to be heard. Those lovers of music who talked the loudest while Pacchierotti sung, were in agonies of terror lest the graceful movements of Vestris, *le dieu de la danse*, should be disturbed by audible approbation.

The year 1784 was rendered a memorable æra in the annals of music by the splendid and magnificent manner in which the birth and genius of Handel were celebrated in Westminster Abbey and the Pantheon, by five performances of pieces selected from his own works, and executed by a band of more than five hundred voices and instruments, in the presence and under the immediate auspices of their majesties and the first personages of the kingdom.

No sooner was the projected undertaking known, but most of the practical musicians in the kingdom eagerly manifested their zeal in forwarding it; and many of the most eminent professors, waving all claims to precedence in the band, offered to perform in any subordinate station in which their talents could be most useful. It was also determined to employ every species of instrument that was capable of producing grand effects. When the orchestra and galleries were filled, they constituted one of the grandest and most magnificent spectacles which imagination can paint. The preparations for receiving their majesties, the royal family, and the first personages of the kingdom, at the east end; the orchestra at the west; and the public in general, to the number of three and four thousand persons, in the area and galleries; so judiciously corresponded with the architecture of this venerable and beautiful structure, that there was nothing visible, either for use or ornament, which did not harmonise with the principal tone of the building, and may not metaphorically be said to have been in perfect tune with it. At the east end of the aisle, just before the back of the choir-organ, a throne was erected in a beautiful gothic style, corresponding with that of the abbey; and a centre-box, richly decorated, and furnished with crimson satin fringed with gold, for the reception of their majesties and the royal family: on the right hand of which was a box for the bishops; and on the left, one for the dean and chapter of Westminster. Immediately below these boxes were two others; one, on the right, for the families and friends of the directors, and the other for those of the prebendaries of Westminster. Immediately below the king's box was placed one for the directors themselves, who were all distinguished by white wands tipped with gold, and gold medals, struck on the occasion, appending from white ribbons. These their majesties likewise condescended to wear at each performance. Behind and on each side of the throne were seats for their majesties' principal attendants, maids of honour, grooms of the bed-chamber, pages, &c. The orchestra was built at the opposite extremity, ascending regularly from the height of seven feet from the floor to upwards of forty from the base of the pillars, and extending from the centre to the top of the side-aisles. At the top of the orchestra was placed the occasional organ in a gothic frame, mounting to and mingling with the patriarchs and prophets represented on the west window. Nor was this commemoration more wonderful for the splendour of its arrangement and the unparalleled multiplicity of voices and instruments employed, than for vocal and instrumental accuracy and precision. The totality of sound seemed to proceed from one voice and one instrument; and was declared, by many of the distinguished judges and lovers of music, to have produced sensations of wonder and delight which they never felt before.



The multitude of angels, with a shout  
 Loud as from numbers without number, sweet  
 As from blest'd voices uttering joy, heaven rung  
 With jubilee, and loud hosannas fill'd  
 Th' eternal regions.

Milton.

Nor was the celebration less distinguished by the company which it assembled. Such an audience was never before collected together on such an occasion in any country; among whom not only the king, queen, royal family, nobility, great officers of state, appeared, but the archbishops, bishops, and other dignified clergy, with the heads of the law, the patrons and professors of science, the world of fashion, and the splendour of beauty.

The commemoration of Handel was for some time continued as an annual musical festival for charitable purposes; in which the number of performers and the perfection of the performances continued to increase. In 1785, the band, vocal and instrumental, amounted to 616; in 1786 to 741; in 1787 to 806; and in subsequent years to still greater numbers. Dr. Burney published an Account of the Musical Performances in Commemoration of Handel, for the benefit of the Musical Fund. The members and guardians of that fund are now incorporated under the title of the Royal Society of Musicians.

This memorable year is distinguished also by the arrival of madame Mara, whose performance in the commemoration of Handel in Westminster Abbey inspired an audience of 3000 of the first people of the kingdom, not only with pleasure, but with ecstacy and rapture.

In 1786 arrived Giovanni Rubinielli. His voice was a true and full contralto from C in the middle of the scale to the octave above. His style was grand; his execution neat and distinct; his taste and embellishments new, select, and masterly.

In 1788 a new dance, composed by the celebrated M. Noverre, called Cupid and Psyche, was exhibited along with the opera *La Locandiera*, which produced an effect so uncommon as to deserve notice. So great was the pleasure it afforded to the spectators, that Noverre was unanimously brought on the stage and crowned with laurel by the principal performers. This, though common in France, was a new mark of approbation in England.

This year arrived Luige Marchesi, a singer whose talents had been the subject of praise and admiration on every great theatre of Europe. Marchesi's style of singing was not only elegant and refined in an uncommon degree, but often grand and full of dignity, particularly in his recitative and occasional low notes. His variety of embellishment and facility of running extempore divisions were wonderful. Many of his graces were elegant, and of his own invention.

The three greatest Italian singers of these times were certainly Pacchierotti, Rubinielli, and Marchesi. In discriminating the several excellencies of these great performers, a very respectable judge, Dr. Burney, has particularly praised the sweet and touching voice of Pacchierotti; his fine shake, his exquisite taste, his great fancy, and his divine expression in pathetic songs: of Rubinielli's voice, the fullness, steadiness, and majesty, the accuracy of his intonations, his judicious graces: of Marchesi's voice, the elegance and flexibility, his grandeur in recitative, and his boundless fancy and embellishments.

During the latter part of the eighteenth century many eminent composers flourished on the continent; such as Jomelli, the family of the Bachs, Gluck, Haydn, and many others, whose different styles and excellencies would well deserve to be particularized, would our limits permit. With the same regard to brevity, we can do no more than just mention the late king of Prussia, the late elector of Bavaria, and prince Lobkowitz, as eminent dilettanti of modern times.

Besides the opera-singers whom we have mentioned, our theatres and public gardens have exhibited singers of considerable merit. In 1730, miss Rafter, afterwards the

celebrated Mrs. Clive, first appeared on the stage at Drury-lane as a singer. The same year introduced Cecilia Young, afterwards the wife of Dr. Arne. Her style of singing was infinitely superior to that of any other English woman of her time.

Our favourite musicians at this time were, Dubourg, Clegg, Clarke, and Festing, on the violin; Kytch on the hautboy; Jack Festing on the German flute; Bafton on the common flute; Karba on the bassoon; Valentine Snow on the trumpet; and, on the organ, Roseingrave, Green, Robinson, Magnus, Jack James, and the blind Stanley, who seems to have been preferred. The favourite playhouse-singer was Salway; and, at concerts, Mountier of Chichester.

As composers for our national theatre, Pepusch and Galliard seem to have been unrivalled till 1732; when two competitors appeared, who were long in possession of the public favour: we allude to John Frederic Lampe and Thomas Augustus Arne.

In 1736, Mrs. Cibber, who had captivated every hearer of sensibility by her native sweetness of voice and powers of expression as a singer, made her first attempt as a tragic actress. The same year Beard became a favourite singer at Covent-garden. At this time miss Young, afterwards Mrs. Arne, and her two sisters Isabella and Esther, were the favourite English female singers.

In 1738 was instituted the fund for the support of decayed musicians and their families.

Of near 150 musical pieces brought on our national theatres within forty years, 38 of them at least were set by Arne. The style of this composer, if analyzed, would perhaps appear to be neither Italian nor English; but an agreeable mixture of both and of Scotch.

The late earl of Kelly, who died some years ago, deserves particular notice, as possessed of a very eminent degree of musical science, far superior to other dilettanti, and perhaps not inferior to any professor of his time. There was no part of theoretical or practical music in which he was not thoroughly versed: he possessed a strength of hand on the violin, and a genius for composition, with which few professors are gifted.

Charles Frederic Abel was an admirable musician: his performance on the viol da gamba was in every particular complete and perfect. He had a hand which no difficulties could embarrass; a taste the most refined and delicate; a judgment so correct and certain as never to permit a single note to escape him without meaning. His compositions were easy, and elegantly simple. In writing, and playing an *adagio*, he was superior to all praise; the most pleasing yet learned modulation, the richest harmony, the most elegant and polished melody, were all expressed with the most exquisite feeling, taste, and science. His manner of playing an *adagio* soon became the model of imitation for all our young performers on bowed instruments. Barthelomon, Cervetto, Cramer, and Crofdil, were in this respect to be ranked as of his school. All lovers of music must have lamented that Abel in youth had not attached himself to an instrument more worthy of his genius, taste, and learning, than the viol da gamba, that remnant of the old chest of viols which during the seventeenth century was a necessary appendage of a nobleman's or gentleman's family throughout Europe, previous to the admission of violins, tenors, and basses, in private houses or public concerts. Since the death of the late elector of Bavaria, (who was next to Abel the best performer on the viol da gamba in Europe,) the instrument seems quite laid aside. It was used longer in Germany than elsewhere; but the place of gambist seems now as much suppressed in the chapels of German princes as that of lutenist.

The celebrated performer on the violin, Lolle, came to England in 1785. Such was his caprice, that he was seldom heard; and so eccentric was his style and composition, that by many he was regarded as a madman. He

was, however, during his lucid intervals, a very great and expressive performer in the serious style.

Mrs. Billington, after distinguishing herself in childhood as a neat and expressive performer on the piano-forte, appeared all at once in 1786 as a sweet and captivating singer. In emulation of Mara and other great bravura-singers, she at first too frequently attempted passages of difficulty; afterwards, however, so greatly was she improved, that no song seemed too high or too rapid for her execution. The natural tone of her voice is so exquisitely sweet, her knowledge of music so considerable, her shake so true, her closes and embellishments so various, her expressions so fine, that only envy or apathy could hear her without delight. We believe that she has now declined public exhibition, and has retired to Venice with her second husband, whose name we do not know.

Mr. Braham, an English Jew, first appeared, when a boy, at the Royalty Theatre, about the year 1784. He was then under the instruction of Leoni, the original Don Carlos in the *Dianna*, and a celebrated singer. Mr. Braham, however, was advised, a few years after, to seek for better masters in Italy, which advice he very judiciously took; and the consequence was, that, on his return to England in 1792, he at once (like Mrs. Billington) took precedence of all the singers he found here. This country has, perhaps, never produced a vocal performer of such extensive powers as Mr. Braham. To a voice of the highest capabilities, he unites a deep and extensive knowledge of music, which gives him an easy and complete command over the resources of his art. His powers, so far from being, like those of the most celebrated contemporary vocal performers, confined to a particular line, are of such a widely-comprehensive nature, as to enable him to do justice to every species of composition, from the simple ballad to the most refined and scientific effort of musical skill. Previous to his appearance on a British stage, it might be said, that the Italian performers had obtained (at least in public opinion) a monopoly of those delicate and difficult touches of the voice, which are now become familiar, and can be employed, in some degree, by almost every member of a musical club, who aspires to the fame of giving pleasure to his companions. This ornamental style will, perhaps, in time, come into disrepute, and give way to that unambitious and bewitching simplicity, which constituted the great charm in the singing of our ancestors. If Mr. Braham has any fault, it is a too great fondness for ornament; and, considering the amazing power and extent of his voice, we cannot much wonder that it should be so. In fact, he lays it on with so much profusion, that, at times, it is no easy matter to recognize the air in which he is engaged. But yet, however we might prefer a more unambitious style, it is difficult not to applaud, even without deriving great pleasure from, a voice of such astonishing compass and sweetness. Mr. Braham, as an actor, seems, like most vocal performers, to go through his part with the most lazy indifference; but, the moment he begins to sing, he appears strongly to feel, and expresses with great power, the sentiments conveyed in the poetry of the piece. There is one excellence in which he is unrivalled, and that is, in conveying the words to the ear of his audience. Both Mrs. Billington and Mr. Braham have been engaged as first singers at the opera-house. The establishment of these two English singers at the head of a foreign corps of artists may be considered as a triumph to our national feelings.

Madame Grassini, who had exhibited her vocal powers in Paris with extraordinary applause, arrived in London in 1805, where she excited uncommon admiration. She appeared in *Zaire*, where the display of her powers not only pleased, but astonished, when it was considered that the compass of her voice did not exceed eight or ten notes.

The year following, madame Catalani divided the public attention with Grassini. This eminent performer is a

native of Sinigaglia in Italy, where her father was a singer of the comic order. She was educated in a convent. The virtuous impressions she there received have continued ever since invariably to influence her conduct. Her father soon discovered the excellence and the value of her vocal powers, which were first exhibited on the provincial theatres of Italy. He soon carried her to Spain, where she attained very high celebrity. It was there her husband, M. de Valabregue, first paid his addresses to her; and it was not till after a perseverance of seven months that he at last obtained her consent to unite her fortunes with his. Her hesitation proceeded from the reluctance of her father, at once to be deprived of his daughter, and of the very great emolument which she brought him. M. de Valabregue had been an officer in the French army under Moreau. From Spain, madame Catalani (for she has retained her father's name) proceeded to Portugal, where she accepted an engagement to come to London. She travelled through France; and at Paris appeared at an occasional concert, where her fame was so great, that the usual price of admission was trebled. She particularly attracted the attention of that extraordinary man who then held the imperial sceptre of the continent of Europe. He ordered her a pension, (its value is about 30l. per annum;) and it was with much difficulty, and only through the interference of the British ambassador (the earl of Lauderdale) then at Paris, that she was permitted to leave that capital, and proceed on her journey. In the dramatic music of the opera, this singer is far superior to any performer ever heard in this country. Her voice is equal to the most difficult execution, while her countenance is interesting, her gestures graceful, and her person elegant. Her easy and clear articulation are particularly striking: her tones are full and liquid: her cadenzas are appropriate and masterly. She has a practice of rapidly descending in half notes, which has excited admiration chiefly by its entire novelty. The clearness and rapidity displayed by her in chromatic passages excite astonishment; and she combines mellowness with distinctness, a high qualification which Mara first taught us to appreciate.

The state of musical composition among us at the present day, is a subject on which much misunderstanding has prevailed. Nothing is more common than to hear people very loud in dispraising all modern, and extolling all ancient, music, who would be utterly unable to relish, or even to tolerate, a piece in the *real ancient style*. Solidity is certainly not the characteristic of modern music: but is it more that of modern literature? or can we wonder that, when the demand for novelty is so great, the efforts to answer that demand should be so numerous; or that, when novelty alone is so sure, as it now is, of creating an interest, we find it most frequently unaccompanied by any quality of more sterling value? Besides, when we compare the modern with the ancient music, we are apt to take the one in the mass, while we possess the other in a state of great refinement. We forget the realms of former days which have long been devoted to oblivion, and think only of the selection which the taste of succeeding years has deemed worthy of being handed down to us. Unfair as this may appear, such is the sort of comparison generally made. But, in truth, this art never flourished more than in the days which have not yet passed away. Whatever may be the merits of Corelli and Handel, (and we are disposed to admit them to be very transcendent,) we can scarcely consent to place those masters higher than many of the great composers who have lived, or who still live, in our own days. Hadyn, Mozart, Storace, Cook, and Arnold, are but lately gone; and Beethoven, Winter, Atwood, and Crotch, yet remain to prove that musical science and taste are far from extinct. We do not forget that Callcott is also a living composer; and we would willingly bestow our mite of praise on his truly original and delightful works: but it is painful to reflect on his excellencies, in the melancholy state of eclipse in which they are under-

stood



stood now to be placed. In mentioning these names, we must not be understood as making any comparison injurious to others. The list might be largely increased: but we are willing to take those only whose works may be said to pretend to a higher character. The oratorio of the Mount of Olives, the work of Beethoven, recently produced in this country, appears to us to combine more excellencies of different kinds than any other piece of the same nature which we ever heard performed. The subject of it, indeed, violates some of the sober feelings commonly entertained by us: but, in spite of that objection, the richness and variety of the same music will always place it among the most admired specimens in the highest branch of the art. Dr. Crotch too, has been scarcely less successful in his noble oratorio of Palestine.

Music, indeed, has of late run into a great variety of styles. The operas and the oratorios of Handel were very similar to each other; so much that, we believe, several of the pieces were occasionally interchanged by him; and, in particular, the fine air of "Lord! remember David," is well known to have been originally adapted to the profane words of a song in an Italian opera. That great master was certainly no accurate distinguisher of styles: a character of uniformity pervades all his works; and it is related of him, that he was in the habit of keeping pieces ready made, and adapting and introducing them as occasion required. In the lighter styles of music, suited to the theatre and the chamber, we cannot doubt the superiority of the modern school. Not, indeed, that we can much compliment the modern English school in these particular departments. Our theatres are obliged perpetually to recur to the works of Arne and his contemporaries; and our concerns are largely indebted to Purcell, Pepusch, Harrington, &c. but it is chiefly to the Italian school that we are to look for excellence of these kinds. There, indeed, a style of music has grown up which, in our opinion, is superior to any thing of which the ancient school can boast. The operas of Mozart, Cimarosa, Winter, Paër, Guglielmi, and Ferrari, carry the art and science of music to its greatest possible height, and exhibit it with its greatest possible varieties. In their works, every thing seems so naturally conceived, that we are apt to imagine some real connexion between the music and the sense, till the existence of any such connexion is disproved by their using the same airs for different words, and producing the same natural effect in all. In the composition of music for the chamber, the Cramers, Clementi, Afoli, Shield, Webbe, Danby, and Callcott, (most of them English artists,) with several of those foreigners who have been previously named, are pre-eminent.

The revolutions which have taken place in the progress of this art are worthy of attention. In the earliest age of composition, we find it strict in science, and simple but not very interesting in style; of this age we have little to quote but the chants of the Christian churches. The art, like most others, was entirely in the hands of the monks. In the next stage, we find conceits of various descriptions prevailing in music; this was the age of madrigals, rounds, canons, &c. and it was also that of acrostics, and those other conceits for which the Italian school of poetry was then so censurable. Many of these are exquisitely beautiful: but it is well known that their difficulty is such, that they are seldom well performed; and in the generality of them the art and labour are so obvious as to cause a disagreeable rather than a pleasant effect. Out of this evil, however, the next stage produced strict and free fugues, imitations, and other pieces of that kind, in which the natural and the artificial effect are more agreeably combined than in most other sorts of composition. Throughout the whole, simplicity of effect has continued gradually to gain ground. In England, the music of Purcell, perhaps, led the way; Corelli and the other Italian masters of his age followed. Something of air and accompaniment was then practised; and, at the next step, we meet with the great point of union of all styles in

Handel and his contemporaries. Of the works of Handel indeed, some are more remarkable for scientific composition and ingenious contrivance than for simplicity of effect: but the observation will not hold as a general rule. He was fond of imitative accompaniment, of which his *Acis* and *Galatea* affords the finest specimen throughout. The taste of succeeding masters has been more sparing of this style. Among those masters, the name of Mozart will ever stand as one of the most conspicuous; since, with a strictness not inferior to that of Handel or the older composers, but with a genius more fertile and unrestrained, he has succeeded in producing the utmost novelty and variety of effect, with the closest and most strictly allowed materials.

#### *Of the miraculous Powers ascribed to Music.*

The wonderful stories of the effects of music, as related by the most respectable historians, are so numerous, that they would fill a volume. Plutarch, in his *Dialogue on Music*, tells us, that Terpander appeased a violent sedition among the Lacedemonians by the assistance of music; and, in his *Life of Solon*, he relates, that this celebrated legislator excited the Athenians to invade and recover the isle of Salamis, by singing an elegy of his own writing. Peace had been restored between them and the Megareans, and they were forbidden even to mention the renewing of the war, on the pain of death; but, by the power of his song, they were so roused to glorious deeds, that they made another effort, and never rested till they had recovered Salamis, the object of the war. This circumstance is likewise recorded by several other historians. Pythagoras, we are informed, stopped a young stranger, who was intoxicated, from setting fire to the house of his mistress in a fit of jealousy; and by ordering the *tibicina*, or female performer, to play in a calm plaintive style, cooled the impetuosity of his passion, and restored him to his reason. Empedocles is said to have prevented murder by the sound of his lyre.

We may, however, very reasonably admit that the words of Solon's elegy were as powerful towards inciting the Athenians to arms as the music; and that Pythagoras's stopping the young man from setting fire to the house of his mistress, Terpander's appeasing a violent sedition, and Empedocles's having prevented murder by the power of music, mean nothing more than that they were brought to moderation by good advice, conveyed through poetry, assisted by her sister art. The story of Amphion's building the walls of Thebes with the sound of the lyre, is without doubt allegorical. Dr. Burney has given the following ingenious solution: "The sweetness of Amphion's poetical numbers, and the wisdom of his counsel, prevailed upon a rude and barbarous people to submit to law and order, to live in society, and to defend themselves from the insults of savage neighbours, by building a wall round the town."

The medicinal effects attributed to music are so numerous, and some of them so well authenticated, that to reject them totally would be to deny credibility to many respectable historians, philosophers, and physicians. Martianus Capella assures us that fevers were removed by song, and that Asclepiades cured deafness by the sound of the trumpet. Plutarch says that Thelates the Cretan delivered the Lacedemonians from the pestilence by the sweetness of his lyre. Many of the ancients speak of music as a recipe for every kind of malady. M. Burette, an eminent physician, who made the music of the ancients his particular study, thinks it not only possible, but even probable, that music, by repeated strokes and vibrations given to the nerves, fibres, and animal spirits, may sometimes alleviate the sufferings of epileptics and lunatics, and even overcome the most violent paroxysms of those disorders. (*Mem. des Inscriptions & Belles Lettres.*) Burette is by no means singular in his opinion; for many modern philosophers and physicians, as well as ancient poets and historians, have declared that they have no doubt

doubt but that music has the power, not only of influencing the mind, but of affecting the nervous system in such a manner, as will, in certain diseases, proceed, by slow degrees, from giving temporary relief to effecting a perfect cure.

In the Memoirs of the Academy of Sciences for 1707, and the following year, are recorded many accounts of diseases, which, having obstinately resisted all the remedies prescribed by the most able of the faculty, at last submitted to the powerful impression of harmony. M. de Mairan, in the memoirs of the same academy, speaking of the medicinal powers of music, says, that it is from the mechanical involuntary connexion between the organs of hearing and the consonances excited in the outward air, joined to the rapid communication of the vibrations of these organs to the whole nervous system, that we owe the cure of spasmodic disorders, and of fevers attended with a delirium and convulsions, of which the memoirs give many examples. Dr. Bianchini, professor of physic at Udina, who has searched numerous ancient authors, and collected all the passages relative to the medicinal application of music by Asclepiades, says, that it was considered by the Egyptians, Grecians, and Romans, as a remedy both in acute and chronical disorders; and he adds, that he himself had seen it applied in several cases with great effect.

Dr. Mead, Buretti, Baglivi, and all the most eminent of their time throughout Europe, seemed not to entertain a doubt but that the bite of the tarantula was to be cured by music. It has been asserted, that the application of music always throws the patient into a violent fit of dancing, which, bringing on a plentiful perspiration, effects the cure. But, as to this, the evidence for and against it will be found under the article ARANEA, vol. ii. p. 32, 3.

Cicero asserts the amazing power of music; and Plato supposes that the effect of harmony on the mind, is equal to that of air on the body. Its divine influence is fully proved in the cure of Saul; and Alexander, the son of Philip of Macedon, after having conquered the greatest part of the world, was himself subdued by the harp of Timotheus.

What is recorded, upon the best authority, of Farinelli and Philip V. of Spain, is not at all dissimilar to the account of David's dispossessing Saul of an evil spirit. See FARINELLI, vol. vii. p. 217.

The story of Stradella, an Italian musician, is not only interesting, but much to our present purpose. Stradella was composer to the opera at Venice; and was very high in the public estimation, both as a singer and a performer on the harp. He was engaged to instruct a young lady of noble family, who, notwithstanding her illustrious descent, lived in a criminal intimacy with a Venetian nobleman. Stradella employed his musical powers so effectually, that he persuaded her to break her connexion with the Venetian, and to be the partner of his future fortune. Upon the discovery of their flight, resentment fired the breast of the Venetian, and he immediately commissioned two assassins to enquire their intended destination, and to murder both Stradella and his mistress, with the promise of a large reward if they succeeded. On enquiry they heard they were gone to Rome, they immediately followed them, found that they were arrived in that city, and learnt that the next evening at five o'clock Stradella was to give an oratorio in the church of St. John of Lateran. They determined to be present at the performance, and to execute their horrid design as Stradella and his mistress were retiring from the church. Stradella appeared; the performance commenced, and their attention was entirely taken up with the music, which created in them such wonderful sensations, that it got the better of that savage ferocity which by long habit was interwoven with their natures; they were seized with remorse; and, in short, they desisted from their purpose, and determined, instead of taking away the lives of the intended victims, to use every endeavour for their preservation. As Stradella and his mis-

tress were returning from church, they followed them, and, addressing them in the most respectful manner, after thanking Stradella for the exquisite pleasure they had received from his music, they told him of the errand they had been sent upon, and confessed that they went into the church *for ages*, but that they now felt themselves *men*, and found they were utterly incapable of carrying their design into execution. They earnestly desired them to quit Rome immediately; and the assassins, on their return to Venice, told their employer, that Stradella and Hortentia had fled from Rome the morning of their arrival, and had taken refuge in the city of Turin, where the laws were very severe, and therefore they declined following them any farther. Other ruffians, however, "who were not mov'd by concord of sweet sounds," were employed; and Stradella and his mistress were murdered not long after.

The following melancholy fact, having been witnessed by a vast multitude of people, can want no farther confirmation to establish it. At the first grand performance in commemoration of Handel, at Westminster-abbey, Mr. Burton, a celebrated chorus-singer, well known in the musical world, was, immediately upon the commencement of the overture of Esther, so violently agitated, that, after lying in a fainting-fit for some time, he expired. At intervals, he was able to speak; and, but a few minutes before he drew his last breath, declared that it was the wonderful effect of the music which had operated so powerfully on him. Dr. Hallifax, then bishop of Gloucester, was so greatly affected during one of the performances of the Messiah, at the commemoration, that he greatly wished to quit the abbey, fearing he should be entirely overcome.

But such cases as these, though well authenticated, are yet to be considered as out of the ordinary course of things, and extreme instances of the power of harmony. Let us, therefore, briefly notice those of a more common nature; which by the concurrent experience and testimony of all ages and nations have invariably obtained, in which harmony has exerted her powers, and mingled her mighty but milder charms. And it is obvious, in the first place, to remark on these, in a case of the most transcendent nature; which is the solemn and sublime services of divine worship; in which, when employed, music is by way of eminence very properly styled *sacred*. In this connexion, music was held both by ancient philosophers and legislators of such importance, that the regulation of it in their temples was prescribed by the laws, and subject to the inspection of those who were appointed by the state to superintend this important part, as it was deemed, of the commonwealth. And it was held equally criminal to innovate or disturb the laws and ordinances of this part of religious solemnities, as to violate any other established law of the state.

This we learn from the high authority of Plato himself; and, when it is considered how music, properly chosen and adapted, is calculated to soothe and tranquillize as well as elevate the mind, and thereby fit it in a peculiar manner to receive impressions of the higher order, we shall evidently perceive how well suited this must be to the solemnities of devotion, by drawing off our attention and affections from the present imperfect state, and raising them to the contemplation of divine things, the perfections of the Deity, and spiritual objects; by which means a holy ardour, reverence, and love, are excited; and the mind disposed to receive with delight and joy instruction from the oracles of God delivered in his sacred temple. No doubt but the mind of Milton had often experienced these effects of sacred music; as he, in his *Il Penseroso*, describes them in so sweet and ecstatic a manner:

There let the pealing organ blow  
To the full-voic'd quire below,  
In service high and anthems clear,  
As may with sweetness through mine ear  
Dissolve me into ecstasies,  
And bring all heaven before mine eyes.



Nor does harmony desert us when we are in need of her soothing, consolatory, or sympathetic, aid: for she, like divine Charity, can "weep with those that weep," as well as "rejoice with those that do rejoice." She willingly joins in the mournful dirge, or in the complaining elegy; and, while she lends her cheerful notes to a Solomon, can graciously condescend to assist Ovid, Tibullus, and even Cornelius Gallus, while they pour forth their plaintive strains. And gladly did she join with her favourite Gray, who, in some of his sublime Odes, evinced that he had caught the lofty spirit of Pindar. But we have another illustrious instance of her kind and fostering influence, in the abstractedly-refined and lofty genius of Collins; who has in a most expressive and energetic Ode, aptly and wonderfully described the powers of harmony. This Ode, with that on the Poetic Character, may be considered as singular and extraordinary proofs of the exquisite taste, refined, elevated, and original, genius, of this exalted poet and depressed unhappy man, to whose memory, while we give just and unqualified praise, we cannot but afford a tributary tear of sorrow; and lament, that the intellectual powers of this Bard, so highly worthy of that dignified name, (for of him we may appropriately say,

Infundit lumen Camænis, et cedere necit  
Græcorum ingenii;)

should have been, by any earthly cause, subdued to imbecility; and the brilliant light of his elevated soul extinguished before that of his vital lamp! See the article COLLINS, vol. iv. p. 779.

The late James Harris, esq. (father of the present lord Malmesbury,) author of Philosophical Arrangements, Treatises on Music, Painting, and Poetry, &c. &c. was an excellent musician both in theory and practice. At Salisbury, where he resided, he was looked up to as the father of harmony. In his Discourses on Music, &c. he says, "The superstitious have not a more previous tendency to be frightened at the sight of spectres, or a lover to fall into raptures at the sight of his mistress, than a mind tempered by the power of music, to enjoy all ideas which are suitable to that temper. And hence the genuine charm of music, and the wonders which it works through its great professors. A power, which consists not in imitations, and in raising *ideas*; but in raising *affections* to which ideas may correspond. There are few to be found so insensible, I may even say so inhumane, as, when good poetry is justly set to music, not in some degree, to feel the force of so amiable an union. But to the muse's friends, it is a force irresistible, and penetrates into the deepest recesses of the soul." Chap. vi. p. 98.

The impressions made on us by musical sounds are certainly more lasting than the impressions made by words, as we know that we often retain every note of the melody of a song, when the poetry is forgotten. The Hon. Daines Barrington, in his Miscellanies, mentions a remarkable instance of the lasting impression of music. He says that, being in company with the late venerable lord Bathurst, the conversation turning upon music, and its impressions on the mind, his lordship mentioned a famous opera-song, sung by Nicolini, in the reign of queen Anne, which he had heard with great pleasure; B. requested his lordship to give him an idea of the air, which he immediately complied with, by singing it throughout, and imitated, at the same time, the peculiarities of Nicolini. Lord Bathurst, he says, was at that time eighty-seven, and probably had not heard this song for three score years.

It is an undoubted fact, that animals are susceptible of the power of music, particularly horses and deer; nay, we are told, that even insects feel its influence. Playford, who was a considerable writer on music in his day, says, that he met a herd of stags upon the road to Royston, about twenty in number, following the sound of some musical instruments: as long as the music played, they went forward; but, the moment it ceased, they all stood still; and by this means they were brought out of York-

shire to Hampton-court. The duke of Newcastle, in his Book of Horsemanship, asserts, that horses are delighted with music. Shakespeare asserts the same thing:

For do but note a wild and wanton herd,  
Or race of youthful and unhandled colts,  
Fetching mad bounds, bellowing and neighing loud,  
(Which is the hot condition of their blood;)  
If they but hear, perchance, a trumpet sound,  
Or any air of music touch their ears,  
You shall perceive them make a mutual stand;  
Their savage eyes turn'd to a modest gaze  
By the sweet power of music. *Merchant of Venice.*

The following anecdote was communicated, some years since, by James Tatlow of Manchester, who had it from those who were witnesses of the fact. On a Sunday evening, five choristers were walking on the banks of the river Marcey, in Cheshire; after some time, they sat down on the grass, and began to sing an anthem. The field in which they sat, was terminated at one extremity by a wood, out of which, as they were singing, they observed a hare to pass with great swiftness towards the place where they were sitting, and to stop at about twenty yards distance from them. She appeared highly delighted with the music, often turning up the side of her head to listen with more facility. This uncommon appearance engaged their attention; and, being desirous to know whether the creature paid them the visit to partake of the music, they finished the piece, and sat still. As soon as the harmonious sound was over, the hare returned slowly towards the wood. When she had reached nearly the end of the field, they began the same piece again, at which the hare stopped, then turned about, and came swiftly back again, to about the same distance as before; where she seemed to listen with rapture and delight, till they had finished the anthem, when she returned again by a slow pace up the field, and re-entered the wood.

There is a curious story given by sir John Hawkins, in his History of Music, which will afford some entertainment to the reader. He tells us, that a captain of the regiment of Navarre, being confined in prison, requested the governor to give him leave to send for his lute, to beguile the sad hours of his captivity; which favour was granted him. After singing and playing some time, he was greatly astonished to see the *mice* come out of their holes, and the *spiders* descend from their webs, and form a circle round him: he stood motionless, and, laying down his lute, these animals and insects retired to their lodgings. After six days silence, in which time he was without a visitor, he used the same means, and produced the same effect; and, trying the same experiment frequently, he always found that, whenever he chose to perform, he was sure to be attended by an attentive and numerous company; and by this means he formed an acquaintance which alleviated the dismal hours of imprisonment.

We have seen that music, in less civilized times than the present, was in such great estimation, that whoever cultivated letters thought it likewise necessary to make music their particular study; and it was thought as disgraceful then for learned men to be ignorant of it, as it is for persons of rank, at this time, not to be able to write or read.

Milton says, in his Tractate on Education. "If wise men and prophets are not out, music has a great power over the dispositions and manners, to soothe and make them gentle from rustic harshness and distempered passions." He recommends to his young disciples the composing of their spirits by the aid of this divine art.

But, though music must be allowed to have the power of exalting the soul, and of calming and subduing the passions, and though it has been admired and cultivated by the greatest philosophers and most eminent persons in every age and country, yet we cannot agree with our immortal bard, when he says that "The man who has not music in his soul is fit for treasons, stratagems, and spoils." Many intelligent and amiable persons, who possess in no

small degree the milk of human kindness, are totally indifferent to its charms; and we learn from history, that some of the greatest tyrants that ever disgraced human nature were passionately fond of it. We have already mentioned Nero and Commodus, the Roman emperors; and to these we may add, Charles IX. of France, and Henry VIII. of England. Henry was a considerable musician, both in theory and practice. Lord Herbert of Cheshire says he was a scholar, a philosopher, a divine, and a *curious musician*; that he composed two entire masses for the use of the royal chapel. There is an anthem of his composition now in use, which the late Dr. Boyce has preserved in his excellent compilations of cathedral-music.

Music, however, has ever been the delight of the most accomplished in every civilized country, and has always been considered the most elegant amusement of polite courts. The Egyptians, the Grecians, the Romans, successively cultivated it; and kings, prophets, philosophers, and legislators, have thought it worthy their study and sacred patronage. The Greeks, the wisest and most philosophic race of men to be found in the annals of the world, took great care to have their children thoroughly instructed in its principles; they thought it of the utmost use in forming their minds, and exciting in them a love of decency, sobriety, and virtue. Every polished nation has been found to delight in it, in proportion to the progress it has made in the cultivation of the public taste; its happy effects are frequently felt, by its soothing the mind, gratifying the fancy, and engaging the affections. Those who are enlisted in the more active scenes of life cannot always be employed in business; men of erudition and investigation cannot always be engaged in intense study; nor can the most gay and auspicious situation in life enable any man to fill up all his hours with equal pleasure and satisfaction. He, therefore, who has a taste for the polite arts, has always a source of inexhaustible amusement for his leisure hours; and is not in danger of being a burden to himself, or obliged to seek in the company of the profligate or dissipated, in folly and vice, a remedy for the cross incidents of life.

Dr. Blair says, that the inequality of taste among men is owing, without doubt, in part, to the different frame of their natures, to nicer organs, and finer internal powers, with which some are endowed beyond others. But, if it be owing in part to nature, it is owing to education and culture still more. With respect to a taste for music, only the simplest and plainest compositions are relished at first; use and practice extend our pleasure, teach us to relish finer melody, and by degrees enable us to enter into the intricate and compounded pleasures of harmony. To a common ear, the subject of a complex concerto or a chorus, as it is carried through the several parts, is an unmeaning jumble of sounds; few but those who are acquainted with the principles of simultaneous harmony, or music in parts, feel its influence: the ear must have been a long time in the habits of improvement, before it can perceive its beauties. It is not the voice of nature, but the language of education.

The public taste for music, as the word is commonly applied, was perhaps never in a higher state at any period than at present. The charming music lately produced may be said to divide the hearer's attention between pleasure and astonishment, and plainly to evince what wonderful effects may be produced by men of knowledge and genius, when patronised by a kind, liberal, and indulgent, public.

The cynical and morose, we know, regard music as a luxury, fit only to unbend and enervate the mind; but a celebrated writer says, "There is no agreeable sensation we receive either from beauty or sublimity, but what is capable of being heightened by the power of musical sound." Montaigne, one of the first names in modern philosophy, prefers music to all other amusements; he says, in his *Spirit of Laws*, that "it is the only one of all

the arts that does not corrupt the mind." This is high praise indeed. The same opinion is entertained by Mr. Bruce. In a letter from him to Dr. Burney, giving an account of some musical instruments which he found in Abyssinia, he says, "It should be a principal object of mankind to attach the fair sex by every means to music, as it is the only amusement that may be enjoyed to excess, and the heart still remain virtuous and uncorrupted."

"Of all the enjoyments of sense (says an eminent divine) music is the least sensual. Its effects, if rightly improved, terminate not in the bare pleasure of amusement, but seem peculiarly adapted to minds susceptible of religious impressions; its charms being calculated to inspire a just idea of Him who formed the heart to a relish of such delights; who endowed us with capacities to proclaim his praises, and taught us how to raise our souls to the rapture of angels." *Hanway's Travels in Persia*, vol. ii.

Music is daily employed in the cause of humanity; and the force of her pathetic addresses has frequently opened the heart of the miser, and caused the beneficent to indulge in an excess of liberality; her accents form the appropriate language of affliction; she can supplicate compassion for the distressed and unfortunate, and triumph with the happy and victorious. In various instances she has been the means of "relieving the distresses of the fatherless, and making the widow's heart sing for joy." She alleviates labour, mitigates pain, and soothes the troubled mind:

Is there a heart that music cannot melt?

Alas! how is that rugged heart forlorn!

Is there, who ne'er those mystic transports felt

Of solitude and melancholy born?

He needs not woo the muse; he is her scorn. *Beattie.*

The music of Handel has given bread to thousands, not only in the metropolis, but in many other places where it has been performed for charitable purposes. The meetings at Birmingham, Gloucester, Hereford, Worcester, Salisbury, Winchester, &c. &c. are indebted to music, and chiefly to Handel's, for their support. The Royal Society of Musicians has accomplished what few other societies can boast of, the maintenance of their own poor, by which they have taken off a burden from the public. Upon the whole, there cannot remain a doubt of its great utility. As it has, from the earliest ages to this day, been introduced into almost all religious societies, and been employed in the service of the Almighty, as it is the harbinger of the greatest Christian virtue—*Charity*; and, as it is capable of diffusing so much rational pleasure, we may pronounce it a blessing given us by the beneficent Parent of the universe, to soothe the rugged path of this mortal life; and designed, when employed in the solemn and sacred service of religion, to allure our souls to seraphic strains, and to prepare us for that celestial concert where myriads of blessed spirits continually stand in the presence of God;

And with songs and choral symphonies  
Circle his throne rejoicing.

*Paradise lost.*

Thus, though transiently, we have seen how harmony in general and in particular is suited to man's nature, accommodated to his pleasure, improvement, and delight, from the sublimest degree of worship of Deity, to that of recording the merits and praiseworthy deeds of demi-gods, and of all those illustrious characters who have by their virtues and wisdom been benefactors of mankind; how much man is indebted to this sovereign power in all circumstances either of prosperous or adverse nature, to heighten his joy or afford him soothing consolation; to calm the turbulent passions of his mind; and, by refining them from all sordid ingredients, to purify and spiritualize it in this world, so as to fit it, in concert with religion, for the enjoyment of a more exalted and glorious state.



## OF NATIONAL MUSIC.

Smollet in his History of the Hebrides, tells us, that every laird entertains a piper as one of his household, who always marches at the head of the clan, with his bagpipe, to animate them to battle, with martial tunes composed for that purpose; and that such is the influence of this single instrument over these people, that the piper, by varying his airs, never fails to melt them into sorrow or despondence, and by a sudden transition of rousing them to rage and revenge, and a total contempt of danger and of death; nay even in the greatest emergency of war they will not march a furlong or draw a sword, without being roused by the music of this instrument. The highlanders have a particular species of tune, called a *pibroch*; some of their tunes (which a stranger cannot possibly reconcile to his ear) are intended to represent a battle; they begin with a grave movement resembling a march, then gradually quicken into the onset, run off with a noisy confusion and turbulent rapidity, to imitate the conflict and pursuit; after which they swell into a few flourishes of triumphant joy; and close with the wild and slow wailings of a funeral procession. This transports and elevates a highlander; it conveys to his mind the sublime ideas of danger, courage, armies, and military service.

There is a dance in Switzerland, which the young shepherds perform to a tune, played on a sort of bagpipe, called the *ranz des vaches*; it is wild, and has little to recommend it, if we judge only by the notes, without being acquainted with the style and manner of it. But the Swiss are so intoxicated with this tune, that, when abroad in foreign service, if they hear it, they burst into tears, and often fall sick, and even die of a passionate desire to visit their native country; for which reason, in some armies where they serve, the playing of it is prohibited. This tune, the attendant of their early youth, recalls to their memory those days of liberty and peace, those nights of festivity, those tender passions, which formerly endeared them to their country; and awakens in them such regret, when they compare their former happiness with the scenes of tumult they are engaged in, and the servitude they are obliged to undergo, as entirely overpowers them.

Mr. Bruce, in his description of the war-trumpet used in Abyssinia, says that it sounds only one note, in a loud, hoarse, and terrible, tone; that it is played slow, when on a march, or before an enemy appears in sight; but afterwards it is repeated very quick, and with great violence; and has the effect upon the Abyssinian soldiers of transporting them absolutely to fury and madness, and of making them so regardless of life, as to throw themselves into the midst of the enemy, which they do with great gallantry. He adds, that he has often, in time of peace, tried what effect this change would have upon them; and found that none who heard it could continue seated, but that all rose up, and continued the whole time in motion.

Music is in a great measure under the continual influence of *memory*; that is to say, our pleasure arises not merely from quietly listening to the notes, but from our associating the sounds of those notes with events that have happened long before. This may probably be the reason why a new piece of music, however we may afterwards do justice to its beauty, will seldom make so strong an impression upon us as an old one; and why, in every country, the favourite and real *national music* will for ever be observed to have a different style from what it is found to have in another country. Music, thus being an accompaniment to our feelings and actions, will therefore display sounds analogous to them, and consequently we shall prefer not only the national *tune*, but even that tune if sung in our *own* perhaps ruder language, to the sweetest foreign one. However finer the last may be than our own, however more melodious the sounds may really be than those of the songs of our ancestors, or of our own living national composers, we shall, perhaps, in listening to their finer melody, luxuriously

spend our hour, but feel nothing of that warmth with which we are inspired at hearing one of our own national airs sung or played, particularly when unexpected. And thus that national music, viz. those sounds which express the character of a nation, *will never be entirely fettered by general rules of beauty.*

The voluptuousness of Italian national music will paint a life chiefly spent in pleasure and enjoyment under the most beautiful sky in the world. Next to it comes the national music of the Portuguese, more like the Italian than any other, exhibiting a nation, where, in the want of genius for invention, an astonishing talent for imitation, and a taste in the choice of what they hear and see, has become in itself a kind of interesting originality. Spanish songs bear a resemblance to both; but they possess more energy, united to a romantic turn, and to a certain pompousness.

The national music of all northern nations has in general a melancholy cast, appropriate to a cold climate, connected with a solitary life; yet there will be found some striking differences by which the several nations are characterised. The national songs of the Russians will be easily distinguished both from the Irish or Scottish, or from the Danish or Swedish. There is in their melody very often a sort of barbarism, as the song generally does not finish in the key-note, a peculiarity which is much less observed in the tunes of the other northern nations. To hear a regiment of Cossacks sing, on entering a town, is like listening to the elaborate chorusses on the stage. Whoever knows how difficult it is, sometimes, to make a chorus go on well, even when executed by those whose profession it is, must be struck when he hears common soldiers perform with the greatest accuracy. Whether this talent for music is inherent in the Cossacks, or whether it has been the fruit of study propagated through many centuries, remains doubtful. With this latter supposition we might perhaps look upon it as being derived from the Grecian canonic song in the churches, in the times of the Christian emperors, when, unlike our choral songs, in which every body uniformly sings only the melody, the fingers executed the different parts according to what they thought agreed with their voice; a custom which is still kept up in the Grecian liturgy. The imperial horn-music, where from fifty to sixty people play upon the horn, and where *each of them, having but one note to sound*, yet falls in always exactly at the given time, and so contributes to the performance of a most beautiful concert, is another instance of musical talent which no other country affords.

The great softness of the Swedish, and particularly the Danish, language, makes the songs of those two nations appear less striking than would be the case if we could hear the music set to words of perhaps ruder language. A language may be soft without being agreeable, and may sometimes want the force of the neighbouring idiom without possessing the luxuriant and voluptuous harmony of words of that of another more southern nation.

Very characteristic, and seemingly like each other, yet different, are Scottish and Irish songs: though both are melancholy and gloomy, and though both of them paint the discomforts of solitude, and of a northern climate, yet there is in the Irish tunes more variety than in the Scottish.

England may perhaps be said not to possess any national music at all. There are, no doubt, songs; yet it would be very difficult to recognise by them the character of the nation. To find out the cause of this singular phenomenon, in such a celebrated and great nation, will prove an interesting enquiry. Baron Arnim reasons upon it as follows: If by national music we are to understand the expression of national character, the word *character* can naturally not be understood otherwise than the representation of the reigning propensities of such a nation in conjunction with the climate in which it lives, and with  
its



its moral and political situation, which have operated either in suppressing or in encouraging these propensities. But we believe it would be difficult to point out any other propensities of the generality of the English nation than the love of virtue, country, and domestic happiness, every effusion of enthusiasm being already suppressed as well by religion and education as by habit. These propensities of the mind, united to a mild climate and to a happy and glorious constitution, will therefore make the songs of the English appear gay, although not very lively; and therefore pleasing, without producing a deep and lasting impression.

But, allowing the English to have strong passions, there exists another reason which explains the absence of national music in them; that is, *they have no leisure to exhale their character in songs*. The national song has always been the offspring either of solitude, and of activity of mind and feelings, without the means of applying it to action, or of a voluptuous *doing nothing*—the *dolce far niente* of the southern nations, the effect of a hot climate; which, joined to an ardent imagination, invites us either to the enjoyment of repose, or to the gratification of the senses. The difference between the stanzas of a song and the verses of many an epic or didactic poem is therefore almost the same as that between a national melody and a great musical composition, in which harmony is often found superior to melody. A genuine national song is, as well in words as in melody, the produce of imagination. A poet, who in such a moment is conscious of the rules of poetry, a musical composer who remembers those of music, will never produce any thing that may please the whole nation, whatever be the occupation in which individuals are engaged. The most national song that ever has been generally sung throughout a country is the German air, *Freut euch des Lebens*, "Life let us cherish." The composer (his name is Nageli) is only known as the author of some learned music, which perhaps will one day be forgotten; but his song will last for ever, as well as our famous air of "God save the king."

In the southern climates, the youth sits in the evening before his door; the heat of the day is over, the air is tranquil, no idea of rain or storm, the sun is setting with a glow, the sky produces a finer blue than anywhere else; he is perhaps awaiting the fair one who will bless him with love, or is retracing past happiness. What reasons for inspiration of rapturous ideas! Words and music come almost together. Who can think of a rule, or count the syllables on his fingers? and yet the song is enchanting. If the northern nations do not see their sun so glowing, if their sky has not the same blue, and if the plants do not exhale the same fragrance in their country, yet not less does the want of all this inspire the poet and the composer, and produce similar effects, although the *style* of the compositions will be found very different. It is therefore not always what nations *enjoy*, but very often a consciousness of the *privation*, which produces their songs; and it is this which accounts for the melancholy and gloomy cast of most of them. The most fertile inspirer of songs is Solitude. Among all mountainous countries there will of course be found specimens of national music; and, from the times of old until ours, the shepherds have not only invented songs, but their occupations have even supplied the theme of many a musical composition.

It is for these reasons that any free and at the same time commercial nation, where every-body, during the day, is either involved in the bustle of his own or of the affairs of the community, and where, in the evening, the great interests of the state absorb people's minds, and are discussed, will not have many national songs; and this is particularly the case with the English, where, by the care of the welfare of the community, and the constant endeavours to keep up a free and glorious constitution, man is almost constantly attracted, from his earliest youth till the last days of his existence in this world.

## OF MUSICAL NOTATION, OR PRACTICAL MUSIC.


The intervals of the musical scale are expressed by the seven letters A, B, C, D, E, F, G; but, to express the scale of nature, that is, a major scale, without the artificial intervention of flats and sharps, we must begin at C; and our scale will be C, D, E, F, G, A, B, and C repeated to complete the octave.


The teachers of vocal music express these tones by the following syllables:


C	D	E	F	G	A	B	C
Ut	re	mi	fa	sol	la	si	Ut

These they fix invariably to the same notes and their octaves; so that a piece in the key of C is always said to be in *ut*; or, if in F, it is called a piece in *fa*, &c. But signior Muffolini (whose remarks have not met with all the attention they deserve) very judiciously proposes, that the key-note of every piece should be made to begin with the same syllable, *Ut* (or *Do*), as the same intervals, especially the semitones, would then always be expressed by the same syllables. The Italians now use *Do* instead of *Ut*, it being found in practice more convenient to intonate, at least in beginning with a low note. In England, however, *sol-fa*ing is now little used; and we shall therefore in all cases employ the letters, A, B, C, &c. as being more simple, more familiar to British musicians, and applicable equally to instrumental and to vocal music.

Every one knows that musical notes are written upon five horizontal lines, (reckoned from below upwards;) to which are occasionally added portions of lines above and below, which are called *leger-lines*; (from *leger*, Fr. slight or faint.)

There are three clefs. The bass or F clef , placed on the fourth line from the bottom, and which determines every note upon that line to be F, the rest of the notes being reckoned upwards or downwards, as may be

necessary. The tenor or C clef , placed commonly on the third line, and making every note upon that line C, a fifth above the former, and the middle C upon the

organ or piano. The treble or G clef , mostly placed on the second line, and every note on that line will then be G, a fifth above C. But, for vocal music, the F clef is sometimes placed on the third line, and is then called the baritone clef, being intended for voices of a low pitch, between a tenor and a bass. The C clef is occasionally placed in four different positions: on the bottom line, when it is called the soprano clef, being the part sung by boys or women, (and was formerly used in Italy and Germany for instrumental music instead of the treble clef;) on the second line, when it is called mezzo-soprano, but now very seldom used; on the third line, and called contra-alto, which is the counter-tenor or highest men's voices; and on the fourth line, for the tenor voices. Thus in fact we have seven clefs; and the same note, or sound, may have seven different positions, according to the clef placed before it; for instance, each of the marks in Example 1. Plate I. answers to the middle C of the harpsichord: and a note in one position upon paper may, in like manner, answer to every note or sound in an octave. Ex. 2. The frequent shifting of the C clef makes the old music very difficult to read; and it is still the chief difficulty of young practitioners, for no other reason than because it is not now in common use; but it would be as legible as the treble or bass, if learned in the same manner, and if pupils were accustomed to play favourite airs in all kinds of tenor clefs, and transpose by them early in their studies. The printing new editions of old authors of organ and harpsichord pieces, without the admission of tenor clefs, is a mischievous indulgence, which, having





# Ancient Musical Characters of the 14<sup>th</sup> and 15<sup>th</sup> Centuries.

Ex. 5.

The Maxima equal to two Longs.

The Long equal to two Breves.

The Breve equal to two Semibreves.

The Semibreve equal to two Minims.

Rests

## Modern Musical Characters

One Semibreve ----- ○ -----

is equal to

2 Minims ----- ♩ -----

or

4 Crotchets ----- ♪ -----

8 Quavers ----- ♫ -----

16 Semiquavers ----- ♯ -----

32 Demisemiquavers ----- ♮ -----

Ex. 6. 2 bars Rest. 3 bars. 4 bars. 6 bars. 8 bars. 12 bars. 16 bars. 32 bars.

## TIME

Ex. 7. Ex. 8.

Ex. 9. Ex. 10.

Ex. 11.



having precluded the trouble of learning these clefs, renders all the old editions of the best authors of the last century unintelligible; as it does all the music in score written or printed abroad; all vocal music from Italy, and harpsichord lessons from Germany composed 30 or 40 years ago; all the works of Sebastian Bach, and the early productions of his son Emanuel, for the harpsichord, of which the treble or right-hand part is in the soprano clef, or tenor on the first line. These, however excellent, are become totally obsolete and illegible to all but regularly-bred professors, *in our country only*.

Example 3. exhibits the general scale of notes, including the additional keys of a modern grand piano-forte. Ex. 4. shows the scales in the different clefs, as used in vocal music.

Here every thing is exhibited in progression from low to high, or "from grave to acute," as we call it. But a very curious remark occurs in Dr. Gregory's preface to his edition of Euclid: "As the ideas of acute and high, grave and low, have in nature no necessary connexion, it has happened accordingly," says Dr. G. "that the more ancient of the Greek writers looked upon *grave sounds as high, and acute ones as low*; and that this connexion was afterwards changed to the contrary, by the less ancient Greeks, and has since prevailed universally. Probably this latter connexion took its rise from the formation of the voice in singing, which Aristides Quintilianus thus describes: *ἡ δὲ ἐν τῷ πνεύματι, ἐπιπολὴς προεμνεῖται*: Gravity takes place, if the breath is carried upwards from the lower part of the throat, but acuteness if it rushes forth from the higher part."

#### *Characters and Values of the Notes and Rests.*

The value of musical notes is determined according to their degrees of length, or duration. A *rest* denotes a degree of silence equal in length to the duration of the note from which it is named.

It does not appear from history, that the Egyptians, Phenicians, Hebrews, or any ancient people, who cultivated the arts, except the Greeks and Romans, had musical characters; and these had no other symbols of sound than the letters of their alphabet, which likewise served them for arithmetical numbers and chronological dates.

As the notation of the Greeks was imagined in the infancy of the art of music, when the flute had but few holes, and the lyre but few strings, the simplicity of expressing the octave of any sound by the same sign, as in modern music, was not thought of; the most ancient and constant boundary of musical tones having been the *diatesseron*, or fourth, the extremes of which interval were fixed, though the intermediate sounds were mutable; and in the manner of tuning these consisted the difference of intervals in the several genera.

The ancients used likewise four different monosyllables ending with different vowels, by way of *jumification*, for the exercise of the voice in singing; like our *mi, fa, sol, la*. These were, for the first note of each tetrachord, *τᾶ*, for the second *τῆ*, for the third *τῷ*, and for the fourth, if it did not serve as the first of the adjoining and relative tetrachord, *τᾶ*; but, if it began a new tetrachord, it was called by the first name, *τᾶ*. The repetition of these monosyllables is a further proof that the fourth in the ancient music served as a boundary to a system of four sounds, in the same manner as a hexachord did in the Guido scale, and as an octave does for eight sounds in the more modern practice.

As the Greeks used all the four-and-twenty letters of their alphabet for musical characters, or symbols of sound; and as their most extensive system or scale did not exceed two octaves, or fifteen sounds, it should seem as if their simple alphabet was more than sufficient to express them; for, their music being at first only a notation of their poetry, the rhythm, or air, must have been determined by the metre of the verses, without the assistance of signs

of proportion peculiar to music. But, supposing it was necessary for them to have different characters to express the different feet of the verse, it is certain that vocal music was in the want of them; and instrumental, being chiefly vocal music played by instruments, had likewise no need of them, when the words were written, or the player knew them by heart. However, in order to multiply these characters, the letters of their alphabet were sometimes written in capitals, and sometimes small; some were entire, some mutilated, some doubled, and some lengthened; and, besides these distinctions in the form of the letters, they had others of situation, sometimes turning them to the right, sometimes to the left; sometimes inverting, and sometimes placing them horizontally; for instance, the letter *gamma*, by these expedients, served to express

seven different sounds:  $\Gamma \overline{\Gamma} \overline{\Gamma} \overline{\Gamma} \overline{\Gamma} \overline{\Gamma} \overline{\Gamma}$ . Some of

the letters were also barred, or accented, in order to change their symbolical import; and, these still not sufficing, they made the common grave and acute accents serve as specific musical notes.

It is a matter that has been long disputed among the learned, whether accents were originally *musical characters*, or marks of *prosody*. It is in vain to set about determining a question concerning which the proofs on both sides are so numerous. (See Gally and Spelman *against accents*, and Primatt and Forster in defence of them.) Mr. West is firmly of opinion "that accents were originally *musical notes*, set over words to direct the several tones and inflections of the voice, requisite to give the whole sentence its proper harmony and cadence." (Pind. vol. ii.) And the abbé du Bos, who frequently by a peremptory decision cuts the knot of such difficulties as he is unable to untie, asserts, without sufficient proof, that, as poets originally set their own verses, they placed for this purpose a figure, or accent, over each syllable. So that, according to this writer, we are at present not only in possession of the *poetry* of Homer, Pindar, Anacreon, and Sappho, but their *music*. Why then do we complain of the total loss of Greek music? But, as music had characters different from accents so early as the time of Terpander, to whom the invention is given by the Oxford Marbles, which place this event about six hundred and seventy years before Christ; and, as accents for prosody are likewise proved to be of high antiquity, it seems as if there could have been no necessity for the ancients to use one for the other.

But it has already been remarked that the letters of the alphabet, though turned, distorted, and mutilated, so many different ways, were insufficient to express the sounds of all the modes in the three genera; so that recourse was had to accents, as the scale became more extended; in order to augment the number of characters. And Alypius, in the enumeration of the notes in the enharmonic genus, tells us, that *trite symmenon* is represented by *beta* and the *acute accent*; and *paranete symmenon enarmonios* by *alpha* and the *grave accent*. This is a proof that the accents were known at the time of Alypius, and were then used chiefly for prosody, not music, for which they were only called in occasionally. Indeed they are mentioned as accentual marks by writers of much higher antiquity than Alypius; for not only Cicero and Plutarch, but Aristotle and Plato, speak of them as merely regarding the elevation and depression of the voice in speech. However, in the early Greek and Roman misals, the musical characters used in *canto fermo* seem to have been only *lengthened accents*.

These various modifications of letters and accents in the Greek notation composed in all one hundred and twenty different characters, which were still considerably multiplied in practice; for, each of these characters serving many purposes in the vocal as well as instrumental tablature or gammut, and being changed and varied according to the different modes and genera, as the names



of our notes are changed by different clefs and keys, the one hundred and twenty Greek characters produced one thousand six hundred and twenty notes! Two rows of these characters were usually placed over the words of a lyric poem; the upper row serving for the voice, and the lower for instruments.

If we had not the testimony of all the Greek writers who have mentioned these characters, for their use and destination, it would be natural to suppose that the double row of different letters placed over each other, and above the words of a poem, were intended to express *different parts*, with respect to *harmony*; as with us, in modern music, the treble notes are written over the bass, and the first treble over the second; but Alypius, who is extremely minute in his instructions concerning the use of these characters, in all these modes, tells us, in express terms, that the upper line of the notes is for the words, and the lower for the lyre. And we are told, not only by Alypius, but by Gaudentius, that, of the two rows of letters used for musical characters, the upper is for the words, that is, *to be sung*, and the under *to be played*. And he afterwards proves them to have been unisons to each other, both by his definitions and by placing them opposite to the same found in all the scales.

In this author, the notes of the great system of the Lydian mode in the diatonic genus are arranged in the following order:

Ζ Τ Ρ Φ C P M I Θ Γ υ Ζ Ε υ ε λ Μ' Ι  
Η Ι Λ F C Ο Τ < V N Z λ ι Ζ η ε τ' <

And these he defines in such a manner as leaves no room to doubt of the identity of their signification.

It is somewhat strange that the notes for the voice in ancient music should be placed *above* those for the lyre, and consequently further from the words. Meibomius, in his preface, has, however, given a curious reason for this custom, from a fragment of Bacchius, senior: "The upper line of notes is for the poem, the lower for the lyre; because the mouth, which alone gives utterance to the words, is placed by nature above the hands, which produce tones from the instrument."

It is from the indefatigable labour of the learned Meibomius, in his Commentaries upon the Ancient Greek Musicians, particularly Alypius; that we are able to decipher these characters; which, before his time, had been so altered, corrupted, disfigured, and confounded, by the ignorance or negligence of the transcribers of ancient manuscripts, that they were rendered wholly unintelligible. But yet, says Dr. Burney, "with our utmost study, reading, and contemplation, we could reduce the Greek notation to no order, nor ascertain whether it was to be read upwards or downwards."

The system of *modern* Greek notation appear still more complicated and obscure than the ancient. The characters convey nothing to the mind either by their form or names, the greatest part of which cannot be construed, and the rest are construed to no purpose. Their signification, as words, does not point out their meaning as musical characters; and all that we can discover is, that some of them seem descriptive of gesticulations; such as *ἐρανισμα*, which, perhaps, directed the priest to look up, or stretch his hands towards heaven; *σαντος*, which might direct him to make the sign of a cross, or to carry the cross; *λυγισμα*, bending. Indeed, it is said that some of these characters are for the *χειρονομια*, or "legerdmain," and not *δια φωνη*, "for the voice." This is the more likely, as the Greek service abounds in gesticulations and manual dexterity.

The abate Martini was informed, that, though the oriental Greeks have signs for musical sounds equivalent to ours, they sing more by tradition than science. However, the distinctions for the duration of sounds, such as our time-table furnishes, are still wanting. The abate procured an extract from a tract upon the music of the modern Greeks, written by Lampadius; but who he was, or when he lived, no one could inform him. In this

it appears, that the characters amount to more than fifty; among which most of the names of those musical terms, given by Du Cange, from a MS. treatise on the ecclesiastical music of the Greeks, are to be found. (Gloss. Med. et Inf. Græcitat.) Du Cange, who has so amply collected and explained the characters used by the modern Greeks in chemistry, botany, astronomy, and other arts and sciences, is silent as to their musical notation; nor have we been able to acquire any information on that subject, except that with which the abate Martini has supplied us.

To insert here the musical characters still used in the rituals of the Greek church out of Russia, and endeavour to explain them, will perhaps be conferring but a small favour on our readers; for, from the scarcity of music written in such characters, so few will be their opportunities of making use of any knowledge they may acquire by the study of them, that it would be like learning a dead language in which there are no books, or a living language without the hopes of either reading or conversing in it. Those readers who may be desirous of gratifying themselves in matters of curiosity, may consult Dr. Burney's History of Music, vol. ii. where they will find the fourteen musical characters that occur in the Greek MSS. of the Evangelists, written in capitals during the seventh, eighth, and ninth, centuries, though at present they are wholly unintelligible, even to the Greeks themselves. It is observable that the more ancient the MSS. the fewer and more simple are the notes: the Codex Alexandrinus, in the British Museum, has none; and the Evangelistæ MSS. in the Harleian collection, 5785, 5598, both of the tenth century, have only such as those in Burney, which were copied in Greece by Martini. The Codex Ephrem, in the king's library at Paris, of the fifth century, has likewise the same kind of musical notes; and it is assigned as a reason for the Codex Alexandrinus not having them, that it was written for private use, not for the service of the church.

Kircher undertakes to give his reader an idea of modern Greek music and its characters; and has indeed collected a great number of notes and their names, but pretends not to furnish equivalents in the music of the western world. And to insert such barbarous names, and more barbarous characters here without explanation, would no more help to initiate a student in the mysteries of Greek music, than the Hebrew or Chinese alphabet. At the first glance they very much resemble the characters used in Choregraphy, an art invented about two hundred years ago to delineate the figures and steps of dances.

This being the case, we shall puzzle our readers and ourselves no more about Greek notation; but come at once to (comparatively) modern times, and that great era in music, the time-table. We have already mentioned that the time-table was invented by Franco of Cologne about the year 1040. The characters which he used were perhaps more ancient, though Marchetto da Padoua, who wrote in the year 1274, cites him as "the inventor of the four first musical characters." These ancient musical notes were the maxima, or large, the long, the breve, and the semibreve. Thus the shortest of the ancient notes corresponded with the longest of the modern notation; for the semibreve is the longest note at present in use; the minim the next; the crotchet the next, and so on to the demi-semiquaver, which is the shortest note. The length of each rest follows in the same decreasing proportion; and the characters, ancient and modern, are exhibited at one view in Ex. 5.

The first notes in the old time-table had no tails till the minim was invented, which had a tail to distinguish it from the semibreve, as the crotchet had a black head to distinguish it from the minim, of which the head is white, and the quaver a hook to the tail, to distinguish it from the crotchet, of which the tail was straight, &c.

A dot added to any note makes it half as long again. A double dot makes the first dot half as long again.

*Other Characters used in Music.*—A sharp ♯ raises a note one semitone, or half-tone. A flat ♭ lowers a note one

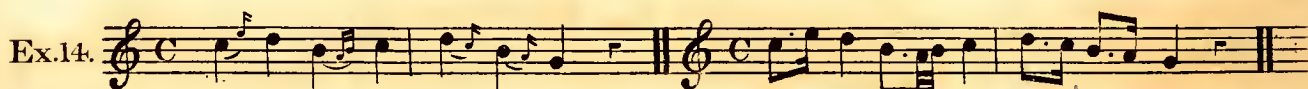
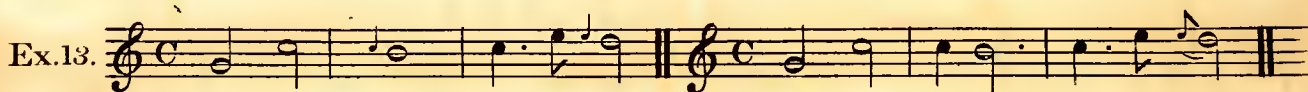




MUSIC.GRACES.

The APPOGGIATURA as written

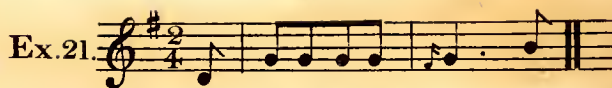
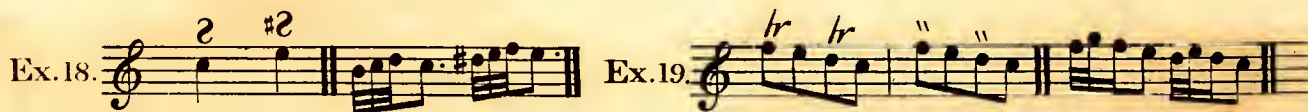
As performed



Written

Performed

Written Performed thus or thus



MOZART



Written

Performed





one semitone. A natural ♮, takes off a sharp or flat. The double sharp  $\times$  or  $\times$  raises a note two semitones. The double flat  $\flat\flat$ , lowers a note two semitones. The slur  $\frown$  denotes that the notes it comes over are to be connected in playing as much as possible. Little dots or short strokes over the notes, are called *Staccato*, and signify the reverse, or that every note is to be played as distinct as possible. The pause  $\circ$  denotes a short cessation of sound, in order afterwards to proceed with more effect. *S.* for *segno*, is used for a mark of reference. The bar  $|$  divides notes when they amount to a certain value. See the word *BAR*, vol. ii. p. 703 and p. 301 of this article. The double bar  $||$  divides pieces into sections or parts, and denotes a conclusion. Repeats,  $:::$ ,  $:::$ , or  $:S:$ , take place first from the beginning, afterwards from the right of the dotted bar. The rests for bars will be seen at Ex. 6. but it is to be observed, that the number of bars rest is more usually marked with figures on the lines.

OF TIME.—Time regulates the duration of musical sounds; and divides their notes by bars, when they amount to a given value. Time is either common or triple: in the first we count 2, 4, or 8, in every bar; in the last, we count 3 or 6.

*Common Time* contains one semibreve, two minims, four crotchets, eight quavers, or their value, in every bar. This time is known by a semicircle, or C, placed at the beginning, after the clef, as in Ex. 7.

The barred semicircle is used to denote a quicker movement, and is called *alla breve*, because it was formerly with one breve in a bar. Ex. 8. This is now commonly written with one semibreve in a bar, by dividing those of the *alla breve* into halves, as at Ex. 9.

All other measures are marked by figures placed one over the other. The figure 2 above the figure 4, in Ex. 10. indicates 2 crotchets or one minim in a bar, and is called half-time.

The most usual measures expressed by figures placed fraction-wise at the beginning, are shown at Ex. 11. where the upper figure may be called the numerator, being the number of parts contained in a bar; the lower one the denominator, or how many notes constitute a semibreve; 2 signifies minims, 4, crotchets, 8 quavers, &c. and therefore  $\frac{3}{4}$  signifies three minims,  $\frac{3}{8}$  three crotchets,  $\frac{3}{16}$  three quavers, &c. These are the three species of *triple time*; namely, three minims in a bar; as at A; three crotchets, as at B; and three quavers, as at C.

When two bars of three crotchets, or of three quavers, are united in one, by the omission of a bar, the time is called *compound common time*: common, because every measure is equally divided; and *compound*, because each half is a single measure of triple. Compound common time has three species in use: six crotchets in a bar, as at D; six quavers, as at E; twelve quavers, as at F.

*Compound Triple Time* is formed by dividing the measures of simple triple into nine parts: thus, three minims divided into nine crotchets, as at C; three crotchets divided into nine quavers, as at H; and three quavers divided into nine semiquavers, as at I.

A species of time, containing five crotchets in a bar, has been used by Mr. Baumgarten with good effect.

OF GRACES.—The old English graces, as published by Simpson, (Division-Viol, 1667.) were divided into two classes, the smoothed and the shaken graces. In the first class were the beat, backfall, double backfall, elevation, springer, and cadent; in the second, were the shaken backfall, close shake, shaken beat, shaken elevation, shaken cadent, and double relish. But, as these are now obsolete, we shall proceed to the modern graces, as exemplified on Plate II. showing how they are marked, and how played.

The graces of melody are, the *appoggiatura*, the *shake*, the *turn*, the *mordente*, the *beat*, the *acciaccatura*, the

*slide*, and the *spring*. The chief ornaments of harmony are, the *arpeggio*, the *tremolo*, and the *tremando*.

The *appoggiatura* is a small note placed before a large one, from which it generally borrows half the value, and always occurs on the accented part of the bar. See Ex. 12. Sometimes, however, the *appoggiatura* is only one quarter of the note it precedes, as at 13.

When a small note follows a larger, and depends upon that for its time, it is called the *after-note*, and occurs on the unaccented part of the bar. Ex. 14.

The *shake* consists of a quick alternate repetition of the note above, with that over which the mark is placed; and commonly ends with a turn from the note below. It begins, according to Handel and Baumgarten, with the lower note. Ex. 15. Some begin the *shake* with the upper note; but this seems to be laying the accent on the wrong place.

The *turn* employs the note above, and that below; and is introduced in various ways, according to the time allowed. Ex. 16. The turn on dotted notes is in frequent use, and is generally placed over the dot, so as to terminate the note. A sharp placed over the turn requires the introduction of the half-note below. Ex. 17. The inverted turn, Ex. 18. begins with the note below.

The *mordente*, or transient *shake*, is marked by Baumgarten like a common *shake*, by Dr. Arnold and other authors thus,  $\text{~}$ . See Ex. 19.

The *beat* is generally made at the distance of the semitone below. Ex. 20. In the *acciaccatura*, or half-beat, the inferior note is struck only once, and at the same time with the principal note, but is immediately quitted. This is frequently used on the organ, and particularly in the bass. It may in some few instances be found on the semitone above, taken as a flat. Ex. 21. The German beat consists of two small notes, which form a skip, and descend one degree upon the principal note. Ex. 22.

The *slide* consists of two small notes, which move by degrees. Ex. 23. The *spring* consists of two small notes, like the *mordente*, but very distinct. Ex. 24.

The *tremolo* is the reiteration of one note of the chord; the *tremando*, a general shake of the whole chord; and the *arpeggio*, an imitation of the harp, by the striking the notes of the chord in quick and repeated succession.

OF FINGERING.—As it is our intention to make this treatise very useful to young practitioners on the organ and piano, we shall subjoin to these rudiments a few directions as to the position of the hands on the keys, with some examples to facilitate the fingering of different passages; for nothing can be of more importance to a beginner than to acquire at the outset a steady and judicious mode of fingering.

Rameau has condescended, in his last work, "Code de Musique," to place the young musician's hands on the keys, and to regulate the fingers; but the business seems to have been better done by Couperin. Rousseau excludes the use of the right thumb, which is an erroneous precept. Rameau's fingering is the old French method, which has been long abandoned. Couperin was the first who treated the subject with intelligence, in 1717; and, though his compositions, for which the rules were given, have long since been thrown aside and forgotten, most of his rules are still good for music of a very different kind. He advises parents to place their children under an intelligent master, at six or seven years old; and prescribes not only the manner of placing the hands on the keys, but the carriage of the person. The height of the seat, if allowed to fit at so early an age, should be such as would place the wrists on a level with the keys; the fingers should be curved so as to be all of the same length, so as that each should cover a key. Something should be placed under the feet of very young students, to prevent them from hanging loose in the air, and to support their frame in a just equilibrium; and this support should be diminished in proportion to their growth. The distance at which a person of maturer age should sit from the instrument should be about nine inches, and less in propor-



tion to the short arms of children. They should place themselves in the middle of the keys, in as natural and easy a posture as possible; the knees not too close, and the feet even. Great attention must be paid to the countenance of children, that no grimace or appearance of difficulty should be visible, and become habitual, which would be attended to by bystanders by more than the music that is performing, however good and well executed. M. Couperin even advises a glass to be placed on the desk of the young performers, in danger of becoming ridiculous, that they may correct themselves. The time or measure should never be marked by the head, feet, or the whole person, which is unbecoming and construed into affectation. Even in counting the time it should be done in a whisper, or else it tends to prevent the ear from having any share in the performance. The fingers should be suspended as near the keys as possible, and all the force should come from the upper joints, not from the weight of the hand, which would be heavy and thumping. Shakes, beats, and trills, in all keys, must be early practised with both hands extremely slow, and quickened by degrees; as must be the exercises for each hand. See the examples hereafter given. The weak fingers of both hands, that is, the third finger and the little finger, must be very much exercised, to make them, if possible, equally brilliant with the others. Chords, if the hands are well placed on the instrument, are perhaps the best rules for fingering; for, if the notes can be well and easily struck together, there will be no difficulty in breaking them into passages. In practising quick passages, the fingers should be lifted up with a spring, and not allowed to hang on the keys till wanted again, unless in arpeggiating chords, or in passages of expression. In the first practice of a shake, in order to keep the wrist quiet, place the thumb on the 5th, 4th, or 3d below, and keep the fingers that are unoccupied as tranquil as possible. Couperin was the first, we believe, who made it a rule for his scholars never to play two notes together with the same finger, unless in repeating chords.

The art of fingering will be found chiefly to depend on a right management of the thumb. In the natural key, and in every key where there are from one to five sharps, the right thumb must be placed, *in ascending*, on the key-note, and on the fourth of the key. As pieces of music modulate into a variety of keys, the scholar may be at a loss to find the key-note; but attention to the order in which the sharps occur, will greatly facilitate the knowledge of it. The sharps proceed by fifths upwards. The following is the scale of the sharps: F. C. G. D. A. Every new sharp, according to the order of the scale, is the sharp seventh, or half a tone below the key-note. Thus F sharp denotes the key of G. C sharp the key of D, &c. When an ascending passage is terminated by the key-note, the thumb will be unnecessary; and this will form almost the only exception to the above general rule.

*In descending*, in every key from one to five sharps, the third finger must be placed on the last sharp. Which last sharp, as we have observed above, immediately follows the key-note. Our limits will only permit us to give one scale of each kind. See Ex. 25.

If a passage should terminate on the last sharp, the first finger must be used; if it descends one note lower than the last sharp, the second will serve.

To *ascend* with the right hand where there are flats, place the thumb on C and on F. This rule is without exception. In descending with the right hand on flat keys, place the third finger on B flat, and the second on E flat. Ex. 26.

In ascending with the *left hand* in the key of C and F, major and minor, and in every key from one to four sharps, begin with the little finger; and, after the thumb, place the second finger on the sixth note of the scale, and the third on the second of the scale. In descending with the left hand in the keys of C and F, major and minor, and in keys from one to four sharps, place the thumb on the key-note, and the fifth of the key. The fifth in descending is the fourth note from the key. Ex. 27.

To ascend, with the left hand on major keys where there are flats, place the second finger on the key-note, and the third finger on the fourth note. In descending, place the thumb after the key-note, and after the fourth note (i. e. on the third of the key). Ex. 28.

When passages are interperfed with turns, inversions, and zig-zag progressions, the regular order of fingering ceases, and some contrivance is necessary, according to the nature of the passages. If you are obstructed by a turn or other variation from the regular progression, place the third finger after the thumb in descending repeatedly till you are brought to the right position; and vice versa for the left hand in ascending. It is often necessary to skip a finger in descending, and to pass the first finger in ascending. In passages of turns, begin with the second finger and end with the thumb, provided the passage ascends afterwards. If the turn follows a descending passage, begin with the thumb, and let the third finger follow. Ex. 29.

In passages ascending or descending by thirds, we have inserted, at Ex. 30. the different modes of fingering by Dussek and Clementi. With the left hand the rules are reversed. The fingering of the chromatic scale, according to the above masters, will be found at Ex. 31.

These few examples, provided attention be given to the general directions which accompany them, will be found sufficient to enable the learner to finger most passages that may occur, and to form, by analogy, additional rules for himself; but it is impossible to lay down rules suited to every case in the vast variety of modulation from one key to another.

An Irish professor has, however, recently undertaken to accomplish all this, and much more, by a mechanical contrivance. Mr. Logier's patent *chiroplast*, or hand-director, includes an apparatus for confining the wrists, and every separate finger, in their proper places; by means of which a right position of the hands must be obtained from the first, and is not likely to be afterwards lost. Mr. L. has also made some other improvements in the method of teaching young beginners; of the excellence of which he is so well convinced, that he anticipates the jealousy of professors against them, and replies to their supposed lamentations: "It has been objected to the success of my plan, that the majority of the profession would oppose it, because it aimed to do that by infallible mechanical means, which is now done by a long process of instruction, and would therefore tend to diminish the necessary call for their attendance. But no argument can be less founded than this; for, though this plan greatly diminishes the most tedious part of professional labour, it must manifestly have the effect of enlarging the sphere of instruction, by giving so much greater inducement to the public to study the piano-forte, when the acquirement of execution on that instrument is so materially facilitated. By the common mode of tuition, how many tedious hours must the pupil and master wade through, before any thing like a proper disposition of the hand is obtained! and how perpetually must the attention of the scholar be called from the more important matter of his studies to the irregularities and awkward position of his fingers! The impediments arising from this cause are often so great, that children are quite disheartened, and give up the desire of playing altogether; or the master, for fear of losing his scholar, permits him to run into habits which are fatal to the acquirement of a proper execution. On the other hand, by the method now presented to the public, the hand and arm of the scholar, though in possession of full liberty for proper action, are totally restrained from all undue motion; the fingers are made to act in a manner so as to give a regular force to each note, and the mind is left entirely free to direct its attention exclusively to the music. By this means, that incessant glancing of the eye from the keys to the book, and from the book to the keys, observable in the greater part of performers, is entirely prevented; and, at the same time that a perfection of execution is obtained, an unusual ease in reading music is acquired. It is plain from



from this, that, so far from being of disadvantage to teachers, this plan will enable them to advance their pupils much more rapidly, and give them that time for the formation of taste, and the study of the more difficult species of composition, which would otherwise be unavoidably lost, both to their pupils and themselves, in the most wearisome drudgery. Can it be for a moment doubted but that manifest improvement would be more likely to induce parents to persevere in obtaining instruction for their children, and children to persevere in their studies, than embarrassments at every step, and scarcely any appearance of progress after repeated lessons? And is it not obvious to experience, that, wherever real facility is held out for improvement in agreeable but difficult accomplishments, there is an infinitely greater number desirous of dedicating their time to them, than when the most dispiriting obstacles lie in their way? Is it not also an insult to the understanding and honesty of a professor, to suppose him more interested in retarding the progress of his pupils than in advancing them, when the commonest intellect cannot but be aware that fame and consequent profit depend on ability to produce able scholars, and not on throwing hindrances in the way of talent, and totally discouraging timidity?"

We are now to describe the Chiroplast.—The first part of the apparatus is called the *gamut-board*. This is an oblong board, which on one side has drawn upon it two staves of five lines each; one for the treble, and the other for the bass; which being placed over the keys of the piano-forte, each note will be over its corresponding key. The other side of the gamut-board represents the chromatic and enharmonic scales. The second part of the apparatus is the *position-frame*, which consists of two parallel rails, extending from one extremity of the keys to the other; to the ends of these are fixed two check-pieces, which, by means of a brass rod and extending-screw, are attached to the instrument. The rails must be adjusted so as to admit the hands of the pupil passing between them nearly as far as the wrists, being so regulated as to prevent any perpendicular motion of the hands, though sufficiently wide to allow a free horizontal movement when required. The *finger-guides* are two movable brass plates, with five divisions, through which the thumb and four fingers are introduced. These divisions correspond perpendicularly with the keys of the instrument, and may be moved to any situation by means of the brass rods. To each finger-guide will be found attached a brass wire, called the *wrist-guide*, the use of which is to prevent the wrist being inclined outwards, which would displace the thumb. "By an early and frequent use of this apparatus," says the inventor, "it is evident that the learner *must* become habituated to a proper position of the body, and a graceful motion of the arms; and the fingers *must* acquire an independent motion, and equality of power, rarely accomplished by other means."

The above account is from the "Companion to the Chiroplast," published by Mr. Logier in Dublin and in London about the year 1814. The same work contains the ground-work of his method of instruction, with simple lessons adapted to the progressive improvement of the pupils. The "Sequel to the Companion," published in 1816, comprises a series of lessons composed on those original subjects, contrived so as to be played either alone as distinct lessons, or in full concert with others, being grounded on the same succession of harmonies; the variations embracing nearly every description of passage. At his musical academy in Dublin the author "makes use, in one room, of four square piano-fortes, two grand ditto, two harpsichords, and a small organ, the latter to support the harmony by sustaining the chords." One or two pupils are placed at the same time at each instrument. By playing together the different lessons adapted to their capacities, a complete (Irish)-band is formed, capable, it is said, of great effect. The original subjects in the former work are here written in small notes, with the variations

in a larger character underneath. To execute the latter, particularly those with cross-hands, it should seem that the chiroplast with all its paraphernalia must be taken off.

Mr. Logier, having fully established his system in Ireland, and having been joined by Mr. Webbe, a member of the Philharmonic Society, proceeded to London, and invited the members of that society to an examination of the pupils taught upon the new system. After some trifling bickerings and disputes about form, an examination of Mr. Webbe's pupils and his own was entered upon, in the presence of a committee of fourteen members of that society, and several other very eminent professors and amateurs, on the 17th of November last, (1817.) The committee of the Philharmonic Society had very properly informed Mr. Logier, "that they had agreed not to give any opinion upon the new system at the moment, but that after the examination they would meet and consult together."

Mr. Logier has just published (Jan. 1818.) "An Authentic Account of the Examination," from which we shall make an extract or two. "Mr. Webbe's pupils, who were entirely beginners upon my system of instruction, were first brought forward. Of these children, the longest learners were of betwixt four and five months only, the full date of Mr. W's establishment; and others of less than two. While these were engaged in playing the early lessons in the Chiroplast, my own pupils, who were also entirely beginners in my academy, from the date of its establishment, viz. two years and a half, performed corresponding lessons of considerable advancement and execution. These performances were received by the committee, generally, with every apparent testimony of entire satisfaction. This display of satisfaction, was however, greatly enlarged, when even these early students in Mr. Webbe's academy came to the exhibition of their acquirements in theory; viz. a thorough acquaintance with the properties of all the keys, even to the full extent of the double-sharp and double-flat mode; a perfect knowledge of the construction of the scale, proved by the ready insertion of all the semitones in their proper places; a prompt decision upon what sharps or flats, or double sharps or flats, were necessary to the formation of the major chord upon any given bass, &c. At the end of this little exhibition of Mr. Webbe's pupils, he received the hearty congratulations of various gentlemen of the committee, for having brought about, by my plan of instruction, a degree of attainment in theory quite unprecedented for children so young, and who had learned so short a time. I received, at the same time, many gratifying compliments upon these early and extraordinary results of my process. The children then resumed for a while their little concert, in the same order as before; Mr. Webbe's pupils playing their most advanced lessons, wherein it appeared that those who had learned longest, viz. betwixt four and five months, had already dismissed the chiroplast. Here ended the exhibition of Mr. Webbe's pupils.

"I now brought forward my own pupils alone, to display their advancement in the theory of music. Their first essay was to connect together all the major and minor keys, with their best arrangement of progression; which having written so rapidly and correctly to a certain extent, as to convince the committee that they were equally ready to write them throughout; they proceeded without delay to play them through the whole circle of the twelve keys. I wrote next, for their exercise, the ascending scale; requiring them to set to it inverted basses, and to harmonise it throughout. Having done this, first, in simple chords, they afterwards added fundamental sevenths, wherever they were admissible, and then further varied the harmonies by forming dissonances in suspension. I then set for them the descending scale in the bass, requiring them to proceed in harmonising it through the same stages as before, of first setting the simple chords, afterwards adding the fundamental sevenths, and lastly, introducing dissonances by suspension. Those who have frequently



frequently seen these and other children, in my academy, performing exercises upon theoretical propositions, will be aware how very far their ability exceeds any thing that was required of them upon this occasion, time not admitting a further advance. Their readiness and facility, however, in performing the above exercises—their cleverness and adroitness in correcting accidental errors, pointed out to them either by gentlemen of the committee, or by myself—and the introducing, in many instances, changes from, and improvements upon, the first form in which they had set any harmony;—these evidences, I say, of positive knowledge, so obviously exceeding any anticipation that the committee had formed, drew forth from the great body of them loud and reiterated bursts of the most genuine applause. For one strong evidence of this fact, I may venture to appeal to one of the committee, Mr. Griffin, who, in the honest expression of his admiration, happening to be somewhat more vociferous than the rest, received from his more wary neighbour a gentle jerk of the sleeve, accompanied by a hint that there was to be no applause; to which Mr. Griffin suddenly replied, with a warmth highly creditable to his candour, By G—, I can't suppress my feelings."

But of this applause, where it had been agreed "there was to be no applause," more was made than the circumstances would justify; and it was rumoured in the newspapers, that the committee had given an unqualified approbation to the system. The Philharmonic Society therefore now thought themselves called upon to publish the opinion which, upon the representation of their committee, they had really formed. This they did in the following terms:

"Saturday, 22d Nov. 1817.

**PHILHARMONIC SOCIETY.**—A report being in circulation that this Society have examined into and approved of a new system of musical education; it is judged expedient to apprise the public, that, though several members of this body did attend an exhibition of some pupils instructed by a new method, and that though they were pleased with the alacrity and obliging attention of the pupils, and manifested that feeling by the usual mode of applause; yet they in no way expressed their approbation of any part of the system that claims the merit of originality; on the contrary, they almost unanimously agreed in an opinion by no means favourable to either the principles or practice of the novel mode of instruction now attempted to be introduced. By order of the Society;

W. WATTS, Secretary."

Mr. Logier, however, consoles himself with producing letters of the warmest commendation from several of the most eminent of the profession, as Clementi, Cramer, Wesley, and Kalkbrenner, which last has since joined him; and he informs us, in a note, that "there are now established, upon this system of instruction, twenty-eight academies."

We have done Mr. Logier full and ample justice, by stating the effect of his system upon the performance of his pupils in his own words; but, should this Lancasterian mode of teaching music to pupils by dozens, obtain a firm footing in our land, let us hope, at least, that the demand for the fabric may increase in proportion to the facility and rapidity of working up the raw material; otherwise it must appear very impolitic, at a time when so many artists in every profession are out of employ, to encourage the introduction of fresh machinery into any manufacture whatever.

#### OF THE SCALE, ITS DIVISIONS AND INVERSIONS.

SCALE in music, denotes a *gradual succession* of sounds, either ascending or descending. All modern music arises from the twelve semitones of the diatonic-chromatic scale, and their repetitions in the octave above and below.

By the *Scale of Nature*, from which all other scales are derived, we understand that gradual progression of sounds, which Nature produces, either from the vibrations of a

sonorous body, or from those of the air. The most simple scale of Nature is that, which arises from the transverse vibrations of a long string, or from the longitudinal ones of the air in a long tube.

It has already been noticed, under the article *Acoustics*, vol. i. p. 87. that a sound from a string or a tube, as it dies away, will be divided into four different parts, which will be distinctly heard in succession, namely, the note itself, its octave above, its 12th, and its 17th. Now, as the three clefs, F, C, and G, treble, tenor, and bass, are fifths above each other, their natural harmonies will thus form the regular scale of notes. Let a string tuned to F be struck, and it will produce F, *f*, c, A; then strike C, and you have C, c, g, E; next G, and you have G, g, D, B.

The most usual way of making the experiment is by sounding the thickest string of a violoncello, or of a double-bass. But signor Mussolini proceeded in a different manner, of which he has given us an account in his *Treatise of Thorough Bass*, &c. published in the year 1798.

"To know and to fix the nature of these intervals, I made use of certain tubes or pipes, which are employed in Russia, for the performance of music, in a manner no less agreeable than extraordinary. The musicians are provided with a number of wooden pipes of different lengths, each musician taking one, which can only give a single note. Of those who are to play the part of the first violin, for instance, which they do from written notes, each attentively watches every occurrence of the note which belongs to his pipe, and blows it according to its proper length of time; and in this manner they execute, from beginning to end, the parts of the first violin, second violin, tenor, and bass, of any piece of music. I got one of those who played the bass, and whose pipe gave the note F, to sound that note three different times. I went a few paces from him, that the sound might be perfectly formed, and properly heard; and took with me the three musicians whose pipes gave the octave above; the 12th, or the fifth to the octave; and the 17th, or third to the double octave. We always heard, together with the principal sound F, the three harmonic sounds above mentioned, very distinctly. I had the further precaution of making one of those with me sound his octave F very softly, which we found in perfect unison with the harmonic joined by Nature to the principal sound. The second time of sounding the principal or generating note, we found the 12th perfectly in unison with the correspondent harmonic; and the same on the third sounding; as to the 17th. The four sounds then, were F, F, C, A. I next made the experiment with C, the 12th of the generating sound F, being more homogeneous with it than the 17th. The result we found to be, C, C, G, E; and, by the same reasoning, the experiment repeated with G produced G, G, D, B. And it will be found that these three experiments fill up the extent of the octave, and contain the intervals required.

"If we examine these three fundamental sounds, F, C, G, we shall find, that the sound C is generated by the sound F, and generates G; and consequently that it holds the place of the greatest relation in the series, and ought to be particularly attended to. We may therefore consider this sound, or note, as the centre of the system, or, as it is commonly called, the *key*. F, being a note a fifth graver, and by which C is generated, we shall denominate the *sub-dominant*; and G, which is acute fifth to, and generated by, C, we shall call the *dominant*. Thus, when any note whatever is taken and considered in this double relation, it will stand as the key. We have said that our three experiments produced the three series of intervals, F, *f*, c, A; C, c, g, E; and G, g, D, B. Let the repetitions, as distinguished by the small letters, be suppressed, and the octaves inverted; there will remain the seven intervals required, a system known by the name of *gamut*, or *diatonic scale*, C, D, E, F, G, A, B=C."

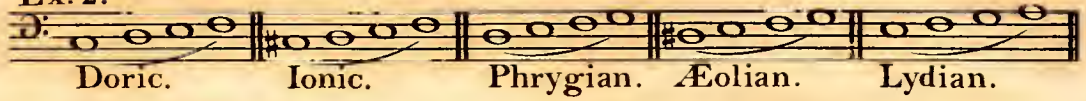


GREEK MODES.

Ex: 1.



Ex: 2.



Ex: 3.



Ex: 4.



# ECCLESIASTICAL MODES, etc.

Ex: 6.

Ex: 7.

Ex: 8.

Ex: 9.

## TABLE OF INTERVALS.

Ex: 10.

unison	superfluous unison	minor second	major second	extreme # 2 <sup>d</sup>	minor third	major third	extreme # 3 <sup>d</sup>	major fourth	extreme # 4 <sup>th</sup>	minor or false fifth	major or perfect 5 <sup>th</sup>	extreme # 5 <sup>th</sup>	minor sixth	major 6 <sup>th</sup>	extreme # 6 <sup>th</sup>	minor or # 7 <sup>th</sup>	major or # 7 <sup>th</sup>	octave	ninth	tenth	eleventh	twelfth	thirteenth
1	1	b2	#2	2	b3	#3	4	4 <sup>+</sup>	b5	#5	5	b6	#6	6	b7	#7	8	9	10	11	12	13	
1	1	2		3	4		5		6		7		8		Extended Scale								
or prime.																							



In these natural harmonies, the 17th, that is, the third to the double octave, is always sharp; and hence it has been affirmed, that minor mode, in which the third of the key is flat, is entirely the work of art, not of nature.

In whatever mode the above experiments may be made, it is to be observed, that the additional sounds are always generated *above* the key-note. But, if two different sounds be made at the same time, a person standing between them will hear a third, which is *lower* than either of the notes that have been sounded. This curious discovery was made by signor Tartini, of which the reader may accept the following compendious account. If two sounds be produced at the same time properly tuned and with due force, from their conjunction a third sound is generated, so much more distinctly to be perceived by delicate ears as the relation between the generating sounds is more simple; yet from this rule we must except the unison and octave. From the fifth is produced a sound in unison with its lowest generator; from the fourth, one which is an octave lower than highest of its generators; from the third major, one which is an octave lower than its lowest; and from the sixth minor (whose highest note forms an octave with the lowest in the third formerly mentioned) will be produced a sound lower by a double octave than the highest of the minor sixth; from the third minor, one which is double the distance of a greater third from its lowest; but from the sixth major (whose highest note makes an octave to the lowest in the third minor) will be produced a sound only lower by double the quantity of a greater third than the highest; from the second major, a sound lower by a double octave than the lowest; from a second minor, a sound lower by triple the quantity of a third major than the highest; from the interval of a diatonic or greater semitone, a sound lower by a triple octave than the highest; from that of a minor or chromatic semitone, a sound lower by the quantity of a fifth four times multiplied than the lowest, &c. &c. In order that these musical phenomena may be tried by experiments proper to ascertain them, two hautboys tuned with scrupulous exactness must be procured, whilst the musicians are placed at the distance of some paces one from the other, and the hearers in the middle. The violin will likewise give the same chords, but they will be less distinctly perceived, and the experiment more fallacious, because the vibrations of other strings may be supposed to enter into it. If the English reader should be curious to examine these experiments, and the deductions made from them in the theory of music, he will find them clearly explained and illustrated in Stillingfleet's Principles and Power of Harmony, printed at London in the year 1771.

We now proceed to the *division* of the monochord.—When the open string of a large bow-instrument, such as the trumpet-marine, the double-bass, or the violoncello, is acted upon with the bow, its whole length, between the two bridges, vibrates in one undivided motion, and produces its fundamental or gravest sound, called its ratio 1. A string, whose ratio 1 is C on the second ledger line below in the bass, when thus divided into aliquot parts, according to arithmetical progression, produces the following succession of sounds, whose ratios (or the length of string they require) are expressed under each letter, viz.

C C G C E G (Bb) C D E (F) G (A) (Bb) B C, &c.  
 $1 \frac{1}{2} \frac{2}{3} \frac{3}{4} \frac{4}{5} \frac{5}{6} \frac{6}{7} \frac{7}{8} \frac{8}{9} \frac{9}{10} \frac{10}{11} \frac{11}{12} \frac{12}{13} \frac{13}{14} \frac{14}{15} \frac{15}{16}$

The sounds expressed by the letters in parentheses, viz. Bb, F, and A, are those whose exact natural ratios have not been preserved in our modern scale. Perfectly corresponding with the scale that arises from the vibrations of a string, is that arising from the vibrations of the air in a long tube that is open at both ends, such as a trumpet or a French horn.

The scale of Nature divides itself as follows: First, into a fundamental note and its repetition in the octave, or the ratios 1, 2, being the compass in which all the other notes are contained; secondly, into the harmonic division

of the octave, or ratios 2, 3, 4, which is important in the explanation of modern music; thirdly, into all the harmonics collected in an octave, or ratios 4, 5, 6, 7, 8, being the only essential notes in modern harmony; fourthly, into the said harmonics and their *diatonic means*, or ratios 9, 10, 11, 12, 13, 14, 15, 16; and fifthly, into the former and their *chromatic means*, or ratios 17, 18, 19, 20, &c. to 32.

#### OF THE ANCIENT GREEK MODES.

It appears, in general, as if the organ of the human voice had been calculated to give two full intervals, and then half a one, as C, D, E, F. Three full intervals, as F, G, A, B, may therefore be considered as unnatural; although they are brought in artificially with great effect, and constitute the upper part of the modern diatonic. Some modern writers have pretended, upon their interpretation of ancient documents, that the Greek melodists constantly played in the minor key, admitting only one full interval and half a one, as D, E, F. But this notion appears unfounded; and, we think, not probable.

The original tetrachord of the ancients was composed, as it appears to us, of two full intervals and half a one, or three full tones and a semitone; and, in the relative position of the semitone with the three full tones, or the half with the two full intervals, we are persuaded that the difference of their famous modes consisted. The succession of notes at Ex. 1. Plate III. will be easily understood.

Farther than these three different positions of the semitone with respect to the full tones, or semi-interval with regard to the full intervals in a tetrachord, we cannot conceive any other combination in the generation of sounds. Therefore, and in all probability, these three tetrachords constituted the three principal modes of the ancients. Let us observe, however, that we ought not to consider the *major* and *minor* modulations or keys, as we have them, to have been the only modes upon which the Greeks have pitched the various systems of their melody. We know that the major third is in general bolder than the minor, and that the intonation of the one has much more majesty than the other: but both have often interchanged their ministration, and we have specimens of very impressive compositions in both these modes, although their particular characteristics be so distinct, that the major has been often styled the *male*, and the minor the *female*, modulation.

As to the notes in the foregoing example, the reader has already found, that the first tetrachord, according to our opinion, answers to the *Doric* mode, and is equivalent to C, D, E, F; the second, which we call *Phrygian*, is composed of D, E, F, G: the *Doric* being the *major*, and the *Phrygian* the *minor*. The next, the *Lydian*, has not been adopted or preserved in modern music; since we have no semi-interval, or semitone, for a key-note. It is here the minor third inverted, E, F, G, A; but it is used in the plain chant for the intonation of psalms, the singing of anthems, hymns, &c. the piece ending generally with a semitone.

Such was, and such long remained, the simple basis of ancient music; but, in lapse of time, a new tetrachord was invented, and obtained the name of *Ionian*. It is almost impossible to guess how the intervals were placed in this combination, unless we suppose two full intervals and two semitones, or two semi-intervals and a full one. But this is mere matter of conjecture: the only point which appears indisputable is, that every one of these four modes or modulations, with its accessories, had a character, the features of which were so distinct, that to a Greek ear the difference was as perceptible as that between *major* and *minor* is with respect to our auditory faculty. Lucian makes Harmonides say to his master of music Timotheus, that he learnt from him how to keep the various characters of the various modes: the nearly divine breathing, *illum quasi divinum afflatum*, of the *Phrygian*, our *minor*; the Bacchic raptures of the *Lydian*, *Bacchicum furem*; the solemn gravity, *honestam gravitatem*,



*tatem*, of the Doric, our *major*; and the softness and beauty, *venustatem*, of the Ionian. The known effeminacy of the long-robed Ionians delighted in the mildness of the notes which they had adopted as national; whilst the gravity and warlike character of the Dorians, *Dorica castro*, marched to battle at the sound of the masculine harmony of the *major* mode. On the other hand, the polite and well-cultivated people of Phrygia mounted their lyre to the delightful and heavenly sweetness of the minor key, leaving to the Lydians the dithyrambic enthusiasm of Bacchanalians and Orgies.

The progress of cultivation in the art soon suggested the addition of a new tetrachord, and the inhabitants of *Æolia* had the credit of the invention. Instead of the original three, the tetrachords were now five, and most probably disposed as in Ex. 2.

The divine art did not long remain there, it went a step farther towards perfection; for we cannot suppose that the confined space of the above-noted tetrachords could in any manner (known to us at least) produce much effect as to melody or symphony. (N.B. Among the Greeks the words *melody* and *harmony* were synonymous, and what we call now counterpoint and accompaniment was expressed by the word *symphony*.) We ought also to take notice of the instruments, especially the flute, which was particularly used to accompany the voice: and it is not improbable that, whilst the flute or lyre were tied to the four notes of the tetrachord, the voice had the liberty of expatiating upon all the sounds which those basses admitted as symphonical below or generated above. What those sounds were, we have already shown in speaking of the harmonics of the monochord.

Joining now to the first tetrachord one of the same power, by taking F as a fulcrum, we find in this union the seven tones of the gamut. Ex. 3. And then the lyre, instead of four strings, and the flute, instead of four holes, admitted the complete and mysteriously-harmonical number of seven. This conjunction of the tetrachords could not be performed but upon the three fundamental ones; viz. the Dorian, the Phrygian, and the Lydian; the intermixed ones, wanting a semi-interval, were obliged to have recourse to the help of the sharp for the lower of the additions notes above them, in order to echo the lower tetrachord in perfect melody; and thence the necessity of tuning the lyre again, or modulating, by some means, the settled tones of wind-instruments, as mentioned in several authors. See Ex. 4.

In the same manner may the tetrachords be placed one above another to the highest pitch; with this difference, that the two first are conjoined; the third does not join with the second, but with the fourth; and thus the same system of modulation, or key, is kept up through the whole diapason.

Let us remark here, that, in the accidental alterations which the intermediate tetrachords are obliged to undergo, we find, in an inverted position, the generation of the *dieze*, or sharp: for, according to the rules of modern tablature, the first sharp alights upon F fa; the second upon C sol ut; the third upon G re sol; the fourth upon D la re; the fifth upon A mi la; an indubitable probability that the tetrachords, called *Ionie* and *Æolian*, were, though perhaps obscurely, the origin of the modern *nuances*, or changes of keys from C to G, from G to D, &c. in the common way. The same rules will apply to the flat, if the tetrachords are carried on to the highest pitch. Were this curious affinity deeply and scientifically entered into, perhaps we might find a much greater analogy between ancient and modern melody. No one can doubt that the Greeks, owing perhaps to the liquidity of their vocal organs, were more nice in the splitting of intervals between sounds than we are. A semitone with us is the interval of either four or five commas; but the ancients used to divide a tone, or interval, in four parts, according to some intelligent writers on the subject: for they mention the *fourth* of a tone. We are aware that what is called in French *note sensible*, the immediate one

below the final, or key-note, is much less than a semitone, principally when, as in the fourth tone of the Gregorian chant, the second, or note above the final, is a semi-tone; (see the Lydian tetrachord;) but we have no wind-instruments that can represent it. The human voice is the only organ properly fit to give an idea of it; and, next, the shifting of the fingers upon the violin, violoncello, and other instruments of a similar nature.

In the course of time new modes which drew their denominations from the original ones, with the addition of the prepositions *ὑπερ* and *ὑπο*, were inserted to complete the diapason. Thus the Lydian mode was surmounted above by the Hyper-Dorian, Hyper-Ionian, Hyper-Phrygian, Hyper-Æolian, and Hyper-Lydian; and below the plain Dorian mode descended the Hypo-Lydian, Hypo-Æolian, Hypo-Phrygian, Hypo-Ionian, and Hypo-Dorian: thus forming fifteen modes in the whole.

These fifteen different modes, or keys, are mentioned and enumerated by Alypius, a Greek musician; but Aristoxenus, according to Euclid, admitted only thirteen, leaving out the higher ones, namely, the Hyper-Æolian and Hyper-Lydian. Ptolemy admitted but seven, viz. the Hypo-Dorian, Hypo-Phrygian, Hypo-Lydian; then the Dorian, the Phrygian, and Lydian; and, to complete the set, the Mixo-Lydian or Hyper-Dorian. The distances between these seven modes were as follows; from the Hypo-Dorian, the lowest of all, to the Hypo-Phrygian, one full interval, or tone, as from C to D; from the Hypo-Phrygian to the Hypo-Lydian, another tone, as from D to E; from the Hypo-Lydian to the Dorian, a semitone, as from E to F; from the Dorian to the Phrygian, a tone, as from F to G; from the Phrygian to the Lydian, a tone, as from G to A; and from the Lydian to the Mixo-Lydian, a semitone, as from A to B $\flat$ ; which constitutes the whole extent of the seven musical tones, or two tetrachords conjoined. And now we come to this interesting conclusion; namely, that the seven keys, or modes, of the Greeks, according to Ptolemy, with the addition of the Hypo-mixo-Lydian, are preserved, as a most curious and precious relic of ancient melody, down to this moment, in the ecclesiastical plain chant used in all Roman-catholic churches.

But of the effect of these ancient modes, or indeed of the nature of them, we at present really know nothing. Butler, however, in his "Principles of Music," published 1636, speaking of the *Lydian mood* of the ancients, which he seems to have persuaded himself he understood, says, "Of this mood is that passionate lamentation of the musical king for the death of his son Absalom, composed in five parts by Mr. Thomas Tomkins, now organist of his majesty's chapel; the melodious harmony of which, when I heard it in the music school (Oxon.), whether I should more admire the sweet well-governed voices, with consonant instruments, of the fingers, or the exquisite invention, wit, and art, of the composer, it was hard to determine."

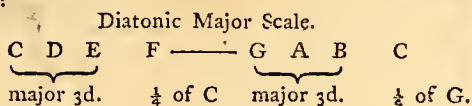
Mr. Kolman derives our modern scale from the Greeks by the following train of reasoning; which, though in some degree it may appear like a repetition, yet it places the matter in a new light, and will prove a help to the reader in understanding this obscure subject.

That most ancient tetrachord (or scale of four notes) of the Greeks, called the *diatonic syntone*, consists of four notes, equal to our B, C, D, E, the lowest on the violin. If we examine that tetrachord, we find it consist of the best part of the diatonic octave in the scale of nature; as thus, C 8, D  $\frac{9}{8}$ , E  $\frac{10}{9}$ , and the lower octave of B  $\frac{1}{1}$ . For the C is evidently the principal note, as octave of a key-note; and the E is its major third, which constitutes the best part of a fundamental *major concord*. The B is the leading note, or major third of the fundamental leading chord to the C; and the D is the fifth of that chord, as well as a diatonic minor between C and E for the use of *melody*. The characteristics of that tetrachord, therefore, are: a diatonic major third; and a semitone below it, as leading note to the principal one.



Now the *completion* of our whole diatonic as well as chromatic scale, seems to have taken place in the mere occasional transposition of the explained tetrachord. For when it was transposed a fourth higher, as thus, B, C, D, E. F, G, A; or a fifth lower, as thus, E, F, G, A; B, C, D, E; it produced the seven notes of our modern diatonic octave. The former transposition produced what the Greeks called the tetrachord *conjoined*, because the higher and lower four notes united in the one note in the middle, as the double letter E E shows; and the latter the tetrachord *disjoined*, because the transposition did not unite the twice four notes in one note in the middle: but in both transpositions the chief consideration remained, the two tetrachords; and no real consideration seems to have been paid at first to the diatonic octave which they produced.

The next transposition of the tetrachord in question, attempted by the ancient Greeks, was that of a seventh higher, or so as to begin a new tetrachord conjoined, in the highest note of the former one, as thus: B, C, D; E E F G, A A B, C D. But there it was impossible to produce the true tetrachord, of a diatonic major third, and a semitone below it, with the octaves of the former, B, C, D, except by introducing between the A and B a new note, which was a semitone above it, and a tone below C. This being done, it produced our B flat, and with it the true tetrachord A, B<sup>b</sup>, C, D; and at the same time it showed that the tetrachord might be transposed on any note of the diatonic octave (or rather ancient tetrachord conjoined) by a similar division of the other four whole tones, C D, D E, F G, and G A, into semitones, as found in the ancient diagram (or scale) of Ariftoxeus, and preserved in our modern chromatic octave. From the above it follows: that, though our modern scale is generally considered as a diatonic or chromatic octave, with its repetitions, it is nothing more than a diatonic or chromatic major third, and its transposition a fifth higher, with an equal fourth to the key-note, as the octave of the key-note is to the fifth of the scale; as thus:



The chromatic scale depends on the same principle, with the mere addition of the semitones between the tones.

A modern diatonic scale is that, which proceeds by whole tones, and such interspersed semitones as make a whole degree of modern notation. It may be either major or minor, according to the greater or less *third* of the key note, which it contains. A major scale is that, whose third of the key note consists of two whole tones; as in C minor. And a minor scale that, whose third of the key-note consists but of a tone and a semitone; as in A minor. A modern chromatic scale is that, which proceeds by semitones throughout, though in every octave two of them make whole degrees in modern notation.

#### OF THE MODES AT PRESENT IN USE.

The chief of the modes at present in use are the major and the minor. The major mode is that which depends on the modern diatonic scale with the major third, as that of C major. The minor mode depends on the modern diatonic scale with the minor third, as that of A minor. The major and minor scale can be transposed on all the other eleven notes of the diatonic chromatic scale. This is called the *harmonic circle*, as given at Plate III. fig. 5. with the sharps or flats that are required for every such transposition.

Both the major and minor mode, may be either strictly diatonic; or diatonic chromatic. To play or compose

strictly in the diatonic major or minor mode of any key, requires the observance of the two following rules.

1. No other notes must be introduced but those contained in the diatonic scale, on which the modulation depends.

2. Every degree of the diatonic scale must be allowed to carry the same chords in harmony, and take the same progressions in melody, as that of the key-note, or its octave. In regard to this second rule it must be observed, that, though every degree of the diatonic scale is allowed to be treated like all the other degrees; yet, according to their different perfection, it is natural that some chords, intervals, and progressions, should be introduced less frequently than others.

From the above two rules follow the different dispositions of the diatonic octave; as when the second, third, fourth, &c. degree of the scale, is substituted as a fundamental note, instead of the key-note. See the following examples. In C major, both ascending, and descending at the back of Plate III. Ex. 6. C, D, E, F, G, A, B; and in A minor at Ex. 7. a, b, c, d, e, f, g. The slur in the preceding examples shows the different positions of the two diatonic semitones between the five tones in an octave.

Concerning the minor mode in particular, it must be observed, that it chiefly depends upon the notes of the descending scale of the key-note, as in the 7th example, a, b, c, d, e, f, g. For the sixth and seventh of the key-note are made accidentally sharp, merely in those cases where the melody proceeds to a close on the octave of the key-note; or where the harmony is a leading chord to a perfect cadence on the key-note, or some inversion of it. See Ex. 8. a, b, c, which are ascending examples: and the application of the same rules to a descending series at Ex. 9. a, b, c.

All those dispositions of the diatonic octave, with the passages that depend on them, may take place in the bass, or in a middle part, as well as in the highest. But, though the accidentally-sharp seventh of the key-note in minor becomes necessary in the cases here shown, the accidentally-sharp sixth is introduced merely for the sake of avoiding the progression of an extreme-sharp second to and from that seventh; as in all other respects the sixth of the key-note in minor ought to be natural.

Though the modulations of some of our modern musicians seem to set all rules at defiance, yet we consider the major and minor modes, as we have given them in all keys on Plate III. as the only legitimate scales for modern music. We shall therefore say a few words more upon that head. A very obvious distinction between these modes, and easily remembered by a learner, in this: In the major, you have first a sharp third, then a flat third; in the minor, you have a flat third from the key, followed by a sharp third; the fifth being the same in both.

Signior Mussolini's remarks and explanations on this subject are somewhat singular, but, we think, not unworthy of attention; as will appear from the following extract: "All writers on music have found themselves embarrassed when they come to treat of the *minor mode*. Unacquainted with its origin, or with its fundamental or generating sound, they have advanced different opinions, in order to give it a more suitable progression and scale; but, in recurring to the principles I have established, every difficulty will vanish. Of what do the harmonies of the key C consist? of a greater third C E, and of a minor third E G: now it is evident that, if the harmonic E G is inverted into A C, which is precisely of the same dimensions and nature, we shall have the two thirds, A C minor, and C E major, which preserve the same relation and the same nature with the two former, C E and E G, and consequently must equally produce the same natural and pleasing effect. Moreover, if we proceed diatonically from A to its octave, without altering any of the intervals which fill up that extension, is it not the same progression as is made use of from C to its octave? We



repeat individually the very same notes, without any difference. Now, to make use of the same progression, the same harmonics and relations, or to be in the same key, is not this one and the same thing? Consequently to be in the key of A minor, or that of C major, will be perfectly the same thing; and therefore both are marked in the same manner, without any alteration of sharps or flats on the clef. The whole difference is this; that in the major key the fundamental is C, and in the minor it is A; and consequently the close, or cadence, in the first case will be on C, and in the second on A. And we may add, that the harmonics in C are both given and combined by nature; and in the key of A, they are given by nature, but combined by art. Or, still keeping in the key of C, you have only to reverse the two thirds, making the first minor, i. e. C to E $\flat$ , and the second sharp, as E $\flat$  to G, the fifth and octave remaining the same. Thus it is evident, that each major key has its relative minor; and, there being twelve major keys, there will be also twelve corresponding minor keys; and therefore the number of keys derived from the progression of the scale, will be twenty-four."

A third mode, differing from both the major and minor, was proposed by a Monsr. Blainville, in France, under the name of the *mixed mode*, the generation and properties of which he explains in his History of Music. This, however, was nothing more than the ecclesiastical mode of E, (see Ex. 6. C.) with a minor second, as well as third. And it is extraordinary that this pretension should have had any abettors in a Roman-catholic country, where old compositions in this mode are daily performed in cathedrals and collegiate churches. However, it was a matter of wonder and debate, during some time, in France. See the *Mercur de France* for 1751.

Modern music has its *genera* as well as the ancient. The *diatonic* is the most common, and is that most agreeable to what is pointed out by nature; but the moderns have their *chromatic* also, and even in certain respects their *enharmonic*, though in a sense somewhat different from that assigned to these words by the ancients.

Thus, the modulation is *chromatic* when several semitones are passed over in succession, as if we should say F, E, E $\flat$ , D, or G, F $\sharp$ , F, E. It is very rare to have more than three or four semitones following each other in this manner; yet, in an air of the second act of *la Zingara*, or the Gypsy, an Italian interlude, there is a whole descending octave almost from C to D in consecutive semitones. It is the longest chromatic passage with which we are acquainted.

Rameau finds the origin of this progression in the nature of the fundamental bass, which, instead of proceeding from fifth to fifth, (its natural movement,) proceeds from third to third. But it must here be remarked, that in the first passage from E to E $\flat$ , there ought strictly to be only a semitone minor, and from E $\flat$  to D a semitone major; but the temperament and constitution of most instruments, by confounding the D $\sharp$  with E $\flat$ , divide into equal parts the interval from D to E; and the ear is affected by them exactly in the same manner, especially by means of the accompaniment.

There are two enharmonic genera, the one called the *diatonic enharmonic*, and the other the *chromatic enharmonic*; but they are very rarely employed by musicians. These genera are not so called because quarters of a tone are employed in them, as in the ancient enharmonic; but because, from the progress of the fundamental bass, there result sounds, which, though taken one from the other, really differ a quarter of a tone, called by the ancients enharmonic, or are in the ratio of 125 to 128. In the diatonic enharmonic, the fundamental bass goes on alternately by fifths and thirds, and in the chromatic enharmonic it goes on alternately by thirds major and minor. This progression introduces, both into the melody and the harmony, sounds which, belonging neither to the principal tone nor its relatives, convey astonishment to the

ear, and affect it in a harsh and extraordinary manner; but are proper for certain terrible and violent expressions. It was for this reason that Rameau employed the diatonic enharmonic in the trio of the Fates, in his opera of *Hippolitus* and *Aricia*; and, though he was not able to get it executed, he was firmly persuaded that it would have produced a powerful effect had he found performers disposed to fall into his ideas, so that he suffered it to remain in the part which was printed. He mentions, as a piece of the enharmonic kind, a scene of the Italian opera of *Coriolano*, beginning with these words, *O iniqui marmi!* which he says is admirable. Specimens of this genus are to be found also in two of his own pieces for the harpsichord, the *Triumphant* and the *Enharmonic*; and he did not despair of being able to employ the chromatic enharmonic at least in symphonies. And why indeed might he not have done so, since Locatelli, in his first concertos, employed this genus, leaving the flats and sharps to exit, and distinguishing for example the D $\sharp$  from E $\flat$ . This, says M. de Blainville, is a piece truly infernal, which throws the soul into a violent state of apprehension and terror.

#### *Of the Ecclesiastical Modes.*

Under this denomination are comprehended those ancient modes, derived from the Greeks, which depend on the different dispositions of the diatonic octave, already shown, when every such disposition is considered as the diatonic scale of a key-note; and they are called *ecclesiastical*, because they have been chiefly attended to in compositions of the ancient church. See p. 324.

The two principal things, on which the doctrine of the modes in question depends, are: the *disposition* of the diatonic octave; and the authentic or plagal division of it. Concerning the *disposition* of the diatonic octave, the ancients did not confine themselves to one major or minor scale and mode, with its transpositions, like modern composers; but they made every disposition of the diatonic octave, as shown on the back of Plate III. at Ex. 6. C, D, E, F, G, A, a diatonic scale of a key-note, which had its own peculiar mode. And the reason why they did not do the same with that of B, was because it has no perfect fifth to the key-note, and consequently no perfect fundamental concord to the principal note. Each of these modes had some *characteristics* which were peculiar to that mode alone, according to the described disposition of its diatonic octave; viz. The mode of D with the minor third, admitted of natural digressions to its fourth with the major third; and to its second with the minor third, and perfect fifth. That of E with the minor third,—to its second with the major third; and to its seventh with the minor third. That of F with the major third,—to its second with the major third; and to its seventh with the minor third, and perfect fifth. That of G with the major third,—to its seventh with the major third; and to its fifth with the minor third. The one of A was nearly like our modern A minor, and that of C like the modern C major.

The *second* object, essential in the doctrine of the ancient ecclesiastical modes, is the authentic or plagal division of the diatonic octave. This is the division which nature proposes in the ratios 2, 3, 4; and which has been particularly attended to in those antiphonies (or anthems) of the ancient church from which our fugues have arisen. For, at the time when the said antiphonies were first composed, the subjects of their melodies were in general of so small a compass, that they did not exceed half an octave, according to the division in question. When therefore a short sentence had been sung in the lower part of the octave, i. e. from the key-note to its fifth, an imitative reply to it was made in the higher part, or from the fifth of the scale to the octave, or the contrary. A melody or modulation in the lower part of the diatonic octave was then called *authentic*, or "principal," because it depended on the key-note itself, and admitted of the authentic or perfect



perfect cadence from the fifth of the scale to the key-note; as thus, G—C. But a melody or modulation in the higher part of the octave was called *plagal*, or “substituted;” because it depended on the fifth of the real key-note, on which it admitted of a close with the mere imperfect or plagal cadence from the fourth to the substituted key-note; as thus, C—G. And, though subjects and modulations are at present allowed a greater compass than that of half an octave, the authentic and plagal division of the octave is still attended to in the answer of fugues; for, when a subject is in the authentic mode, or mode of the key-note itself, and makes a cadence or *cæsura* on the fifth of the scale, the answer must make that cadence on the fourth of its substituted scale, being on the principal key-note, or its octave; and the contrary.

Hence follows the difference between the same diatonic octave when used as *authentic* or as *plagal*. For that of C, when used as authentic, is divided on the fifth thus; C, D, E, F, G; G, A, B, C; and when used as plagal it is divided on the fourth, thus: C, D, E, F; F, G, A, B, C. And the same with all the other scales and modes.

It will appear, from the imperfection of the scales in most of these modes, that they are only capable of melody; and in the common service of Roman-catholic churches, when the priests perform the duty without the assistance of professed musicians, no harmony is attempted to be given to mere *canto fermo*. In cathedrals, the motets and parts of the mass are sung by choirmen and children, as the anthems and services are in our cathedrals.

Notwithstanding the imperfection of the scales, and little variety of keys in the ecclesiastical chants, secular music seems for many ages to have had no other rules, but to have been strictly confined to a few keys in the diatonic genus, without the liberty of transpositions. Hence came the timorous pedantry of excluding all other keys and scales but those used in the church; which kept every kind of melody meagre and insipid, and in subjection to the rules of ecclesiastical chanting. For it appears, that the only major keys used in *canto fermo* are C, F, and G; and the only minor keys A, E, and D. And in four of these keys the scale is deficient, as there is no seventh, or *note-jensible*, to G, A, E, or D. This accounts for so small a number of the twenty-four keys which the general system and scale of modern music furnishes, having been used by the old composers; as well as for the temperament of the organs by which these modes were afterwards accompanied. And as all music in parts seems, for many ages after the first attempts at counterpoint, to have been composed for the service of religion upon *canto fermo*, and its principles; it likewise accounts for the long infancy and childhood of the art, till it broke loose from the trammels of the church, by which it was bound in Gothic times: and by the cultivation of the musical drama sacred and secular, the ideas of composers were enlarged, and the talents of performers improved by new exertions, which brought the art nearer perfection during the two last centuries than it had attained in seven hundred years from the time of Guido.

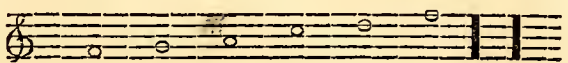
In implicit and religious obedience to the laws of *canto fermo*, no accidental flat or sharp was ever to appear; all the eight tones being rigidly in the diatonic genus in the keys of C and A natural, with no other semitones than from E to F, and B to C. When the scales of these tones are drawn out at full length, they seem nothing more than different species of octave. As to making these scales perfect by adding a flat or sharp at the clef; this was a licence which no one thought of, or at least had the courage to practise, till counterpoint began to gain ground. And even then, the *musica ficta*, or “false music,” as that in transposed keys was called, no one dared to write till lately. Even the orthodox and good Padre Martini, at length vanquished his fears of the impiety of using an accidental flat or sharp in the inward parts of *canto fermo*. See Burney’s *Hist. of Music*.

### *Of the Modes, or Scales, of the Chinese and Singalese.*

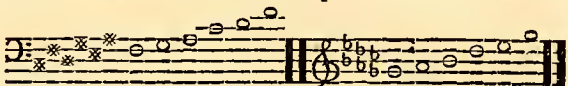
All the specimens which we have been able to procure of genuine Chinese music are without semitones; and seem to confirm the idea of of père Amiot, and the abbé Roussier, that it has been formed by a series of perfect fifths, produced by the triple progression of Pythagoras. Of this series of perfect fifths, however, the ancient Chinese used only five, beginning at F, the fundamental or lowest sound of their system, which produced the following treble scales either way, by beginning at the top or bottom of their great *Lu*, as each distinct arrangement of sounds is called:



And, by giving to these sounds a regular diatonic progression, they furnish the following scale without semitones:



and which is, in fact, the precise Scottish scale, that may be played on the short keys of a harpsichord, or piano-forte, in G\* or Fb. For example:



We had long been trying, (says Dr. Burney,) to ascertain the fact concerning the want of semitones in the Chinese music, and had sent enquiries into different parts of the empire, among which one was, Whether the Chinese had any semitones in their music? or whether their octave only consisted of five tones, instead of seven with which the scale of Guido is furnished? Which question was answered by an Italian who had been thirty years at Pekin, and was a good musician; whose answer was: *La Cinesi nella loro musica non hanno semitoni*; “The Chinese have no semitones in their music.” This confirmed the conjecture to which the melodies which we had seen gave birth; but did not assign a reason for the deficiency. But, after perusing the 6th volume of “*Memoires concernant l’Histoire des Sciences, &c. des Chinois*,” by the missionaries of Pekin, published in 1780, and the Memoir concerning Chinese Music ancient and modern, by père Amiot, one of the Pekin missionaries, of which the abbé Roussier was the editor, we saw no difficulty in assigning a reason for the deficiency in the Chinese scale according to European ideas. For if, instead of stopping at A, the fifth of D, they had proceeded two fifths further, they would have had an E and a B, which would have furnished materials for completing the diatonic octave of five tones and two semitones: their scale would then have been F, C, G, D, A, E, B; which, arranged diatonically, furnishes every sound in the natural scales of C and A.

Sir George Staunton, when at Pekin with the embassy in 1793, remarked the similarity between the Chinese music and the Scotch. “The musicians (says he) affected mostly slow and plaintive airs, not unlike those of the Highlanders of Scotland; which they played in exact and measured time. To Mr. Huttner, a good judge of music, it appeared, that their gamut was such as Europeans would call imperfect, their keys being inconsistent; that is, wandering from flats to sharps, and inversely, except when directed by a bell struck to sound the proper notes. Mr. Huttner farther observed, that the Chinese, in playing on

on instruments, discovered no knowledge of semitones, nor did they seem to have any idea of counterpoint, or parts in music. There was always one melody, however great the number of performers; though, in a few instances, some of the instruments played in the lower octave, while the rest continued in the upper; and thus approached to harmony." Authentic Account of the Embassy, &c. vol. ii. p. 262. 4to. For farther particulars relative to the Chinese music, see the article CHINA, vol. iv. p. 466.

A short account of the state of music among the Singalese, or Singalese, (for so the inhabitants of Ceylon are called,) has been furnished by M. Joinville, surveyor-general to the government; and forms part of an essay On the Religion and Manners of the People of Ceylon, published in the viith vol. of the Asiatic Researches. "Music appears to have been formerly cultivated at Singala, or Ceylon, and reduced into principles. There are pieces of music to be seen in regular notes, in some of the old books in the Pali tongue. The ancients had seven notes, called *Sa, Ri, Ga, Me, Pa, De, Ni*. The gamut was termed *Septa Sonere*. There was no particular sign for these notes; each of them being formed of as many letters as were necessary for their pronunciation. It is very probable that this gamut answers exactly to our's; and consequently, that the beginning of a tune known to all the world, would be written in Singalese music thus: *Sa fa ri ni fa ri, Ga ga me ga ri fa, Ri fa ni fa*. But, as their music in notes has been almost entirely forgotten, I have not been able to discover how they used to distinguish the half-tones, the crotchets, measures, bars, &c. &c. The ancient music of the Singalese is in all probability the same as that of the Indians of the continent. Nothing, however, can be more unpleasant than the Singalese airs, whether sung or played on either kind of their guitars. Their trumpet produces the most annoying sound I ever heard; yet they are fond of it to distraction. They consecrate it to the temples and to the king. Its name is *hoveveve*. Their horn, called *kombove*, is as unpleasant as the former. They have a kind of hautboy that is not quite so insupportable as their other instruments, and which might perhaps, in the hands of an able player, be made to give some pleasing tones; it is termed *nalaée*. They have four species of drums. The first, *daoul*, is long and narrow. They beat it with a curved stick, called *daoul kadipoue*, and use only their left hand to it. The *tammetam* is a kind of kettle covered with a skin on the top, and beat with an instrument called *kadipow*. The *rabani* is nearly similar to our timbrel; but it has no bells. They slide the fingers of the right hand on it, and hold it with the left: women play on it also. They place it on the ground, and three or four at once beat it for many hours together, without regard to time. The *odikie* is the best of all their drums, and is certainly capable of producing a good effect in a piece of music. It is very narrow considering its length. The two extremities of it are tied by catgut-strings to the belt, on which the instrument hangs; this belt goes over the shoulder. They squeeze the drum occasionally with the left elbow, and strike it with their right hand. The pressure on the instrument, by stretching it more or less, makes it produce different tones. The *tammetam* is used in the feasts of the great, and always precedes them in their journeys. It is a necessary part of the music to be played before the temple morning and evening. In fine, it is an essentially-necessary instrument upon all occasions that can attract the attention and consideration of the public. The *rabani* is more adapted for the feasts of friends; the *daoul* is used at all times. But the *odikie* is the instrument of the men of taste. A player on it is, consequently, paid more liberally than those on the *daoul* or *tammetam*.

"The Singalese are very fond of hearing songs. A great man (when travelling) has often one singer before and another behind his palanquin. They each in their

turn sing stanzas of an indeterminate length; as it happens at times that the singer, animated by his subject, gives some verses extempore. The songs are either religious, in which case they extol the virtues of Boudhou, and other gods; or they are historical, and then they praise the virtuous actions of some of their kings, or relate a love-adventure. In all cases the air of the songs is mournful. I have never heard what can be called gay music among the Singalese; and I think it would be very difficult to put any into note; for the measure is incessantly changing, and the movement remaining the same, always slow. It is what is generally called the *andante*."

#### OF INTERVALS.

A sound uttered by itself, and without any relation to others, is not a tone or a semitone in music: it is not a note or any part of melody, much less of symphony, as long as it dies single with the vibration of the air that produces it. It may be referred to a part of an agreed diapason; it may be C, D, E, or any one of the seven tones of the gamut upon the piano-forte, and any other instrument tuned to the pitch-pipe; but in itself it is a mere sound without, as yet, any correlation or name.

Intervals are known in nature relating to the extension of matter and time; between a foot and a yard; an inch and a foot; between a minute and an hour. A third species of interval has been found between natural sounds: hence the distinction between a tone and a semitone. When two sounds are emitted successively, it may be guessed at what distance the one is from the other; whether the distance be a full tone or a semitone, a third, a fourth, a fifth, &c. and the same if the sounds are uttered simultaneously.

An interval then, in music, signifies the distance or space between two fixed sounds; which is measured and determined by the proportions of those sounds in the scale. Harmony supposes the scale to be extended as far as a ninth, tenth, eleventh, twelfth, and thirteenth, sounds; which in fact are but repetitions of the second, third, fourth, fifth, and sixth, parts of the scale, although the laws of harmony do not consider them as such.

Having ascertained the precise distance between any two fixed sounds; whatever it may be, the following figures will show how it should be expressed.

1	regular	2	3	4	5	6	7	8	9
2	sharp	$\sharp$	*	$\flat$	$\natural$	$\sharp$	$\flat$	$\natural$	10
3	flat	$2^b$	$b$	$4^b$	$5^b$	$6^b$	$7^b$		11
4	natural	$2^{\natural}$	$\natural$	$4^{\natural}$	$5^{\natural}$	$6^{\natural}$	$7^{\natural}$		12
5	imperfect			$\overbrace{5}$					13

If sounds are regular, as in the diatonic scale, they are expressed by the figures in the first line, at 1. When the sounds become accidentally sharp, flat, or natural, they are expressed as in the second, third, or fourth, line, at 2, 3, 4. As the fifth tone from the seventh of a major or second of a minor scale is always imperfect, it is expressed as it stands on the fifth line thus, 5. The interval of the third, if sharp, flat, or natural, by an exclusive privilege is expressed by the characters  $\sharp$ ,  $\flat$ , or  $\natural$ , and not thus,  $3^{\sharp}$ ,  $3^{\flat}$ ,  $3^{\natural}$ , as very often improperly written. The figures 10, 11, 12, 13, name rather than express those intervals. Horizontal lines drawn after any of the above

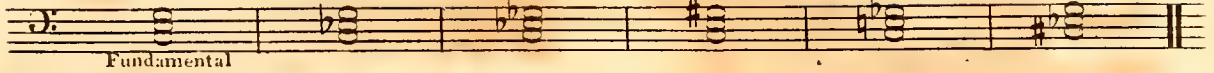
figures thus 3—, or  $\overbrace{5}$ , or  $\overbrace{5}$ , &c. denote a continuation of the respective intervals, or chords.

The



# Common Chord.

Ex. 20. Major Minor Imperfect Extreme sharp



Fundamental

Ex: 21. 8 3 5 Major Minor Ex: 22. In C Major. In A Minor. Ex: 23. A. B. 5 6 8 5 6 7<sup>th</sup> 2<sup>d</sup>

Ex: 24. A. B. C. D. 5 6 4 3 5 6 7 8 5 6 5-6 5-7

## Chords of the SIXTH.

Ex: 25. Triad. Chord of the Sixth. Ex: 26. Triads.

Ex: 27. Ex: 28.

Ex: 29. A. In 4 Parts. B. In 3 Parts.

Ex: 30. Ex: 31. Triad. 1<sup>st</sup> Inversion. 2<sup>d</sup> Inversion.

Ex: 32. Major Keys Minor Keys

Ex:11.

Inversion of the Scale.

8 7 6 5 4 3 2 1

1 2 3 4 5 6 7 8

Ex:12.

PROGRESSIONS.

Similar Motion. Contrary Motion. Oblique Motion.

Ex:13.

Ex:14.

Ex:15.

5 5 5 5 5 5 5 5 8 8 8 8 8 8 8 8 5 3 3 3 5 3 8 5 3 8 8 3 8 5 3 8 8 8 5 5 8 8 5 5

Ex:16.

CADENCES

i k l m

7 6 4 3 4 3 A - - - - men.

Ex:17.

Ex:18.

r s t v w x y z

6 5 4 3 4 2 6 6 6 4 3 6 5 6 4 3 6 5 6 4 3 6 7 b7

Ex:19.

8 6 4 b9 4 7 3 4 7 6 2 6 5 2 7 5 4 8 6 4 b9 4 8 6 4 7 3



The table at the bottom of the preceding Plate, marked Ex. 10. contains an exact measurement of all the distances of sounds in the natural and extended scale; and also shows the method of expressing the same by the above figures.

#### OF THOROUGH BASS AND COMPOSITION.

Intervals may be divided into Concords and Discords.

Concords are			
The perfect Prime	and its Replicates		the perfect Octave.
The perfect Fifth	_____		the perfect Fourth.
The major Third	_____		the minor Sixth.
The minor Third	_____		the major Sixth.

#### Discords are

The Second, Seventh, and Ninth, also the extreme-sharp and extreme-flat intervals.

But, through the different combinations of intervals in harmony, concords may occasionally be treated like discords.

#### OF INVERSION.

Changing an interval so that its lower part is placed uppermost, or its upper part lowermost; or if, instead of the regular way of counting them upwards, we count them backwards; this is called *inversion*. The two following rows of figures placed under each other will show what intervals are produced by inversion; and it will appear that a second becomes a seventh, a third a sixth, and a fifth a fourth, and vice versa.

1	2	3	4	5	6	7	8
8	7	6	5	4	3	2	1

Those intervals that exceed the compass of the eighth, or octave, as ninths, &c. bear no inversion, as thereby no new harmony can be produced. By knowing the replicates of each kind and different species, the more distant intervals, such as sixths and sevenths, may be more easily found on the instrument; since it is easier to count a second or third backwards, than a sixth or seventh upwards. Ex. 11. at the top of Plate IV. will show the nature of the inverted scale at one view, and will prepare the student for other inversions and changes.

#### OF PROGRESSION.

All progressions whatever, may be made in the following three different motions: 1. By regular or similar motion, when two parts ascend or descend together. 2. By contrary motion, when one part ascends while the other descends. 3. By oblique motion, when one part continues on the same degree, whilst the other ascends or descends. All these are shown at Ex. 12.

The rules for applying these different motions in respect to the progression of concords are as follow:

From one perfect concord to another, i. e. from an eighth to a fifth, or from a fifth to an eighth, you must proceed either by the contrary or oblique motion. From this principle of composition arises the established rule, that two eighths or two fifths of the same species are not allowed to follow each other progressively in a regular or similar motion; either gradually or by skips. It may easily be imagined, that eighths that follow by parallel motion cannot fall under this rule, as not being progressive; nor can it be applied to such a case when in a piece of music all the parts proceeded by eighths, or by unisons; because then all the parts are considered as one. According to the above rule, it is allowed to pass from a perfect fifth to an imperfect, though only in descending in similar motion, provided the imperfect descends or resolves afterwards: all which shows that, this case only excepted, no concords are allowed in composition to follow in similar or regular motion, but thirds and sixths. An example of wrong progression of eighths and fifths, in similar motion, is given at Ex. 13. and the same rectified by contrary and oblique motion, at Ex. 14.

From an imperfect concord to a perfect one, i. e. from a third or sixth to an eighth or fifth, you are only to pro-

ceed by contrary or oblique motion. By this rule the consecution of two hidden eighths and fifths is forbidden, as the latter will become visible on filling up the space of these intervals by its intermediate note. See Ex. 15.

#### OF CADENCES.

The termination of any progression is called a *Cadence*. The word seems as it were a metaphor drawn from the dancing-school, where it properly signifies a pause, or fall from motion to rest. A cadence is properly when the parts fall, and terminate on a chord, or note, the ear seeming naturally to expect it; and on the proper management of cadences a great part of the musician's skill depends.

Dr. Pepusch's definition of cadences in music is, perhaps, the most short, clear, and comprehensive, to be found in any elementary book. "Cadences in music are the same as stops in speaking or writing; that is to say, they are endings or terminations either of a part or of the whole piece of music, as stops are of a part or of the whole speech. For which reason they are distinguished into full cadences and middle cadences; these last are like commas and semicolons, after which more is expected to follow, they not making so full a stop as the others; whereas after a full cadence we are sensible that we are come to a conclusion." *Treatise on Harmony*, p. 4.

The proper cadences are—the perfect, the imperfect, the interrupted, and the suspended.

1. *Of the Perfect Cadence*.—As the dominant governs the key, the perfect cadence can only be made by the former tone preceding the latter, with the perfect concord as at *h*, or the discord at *i*, Ex. 16. The common chord of the fifth of the key may likewise be preceded by the  $\frac{4}{2}$  as at *k*; or by the 4 only as at *l*. The cadence at *k* is mostly used in music of a cheerful nature; that at *i*, when serious. The perfect cadence may also be made by the subdominant and key, as at *m*. This cadence is much used at the conclusion of solemn and sacred music. Some authors treat this as an imperfect cadence, which it certainly is, when not used as final: it may therefore be considered perfect in a conclusion, and imperfect in a progression.

2. *Imperfect Cadence*.—The imperfect cadence is made by the key-note preceded by its fifth, as at Ex. 17. *q, r*; or, by the key-note appearing only in an upper part, as at *s*. Or by a retrograde motion of the perfect cadence, as at *t*, and its inversions, *v, w*.

3. *Interrupted Cadence*.—The interrupted cadence, is occasioned by the fifth of the scale not passing immediately to the key-note, as at Ex. 18. *x, y*; or by the key-note bearing a discord, as at *z*.

4. *Suspended Cadence, or point d'orgue*.—The suspended cadence is a withholding of the key by the dominant, on which various chords may pass and repass; and is called (by the French) *point d'orgue*, or organ-point, from its being much used on, and peculiar to, that instrument; and consequently to church-music. Ex. 19.

The resolution of a discord, according to Rousseau, is a kind of cadence: "And, as all harmonic phrases are necessarily connected by discords, expressed or understood, it follows, that all music may be said to consist of a succession of cadences." The *regle de l'octave* seems to favour this idea; as every other sound carries a discord.

Padre Martini's cadences, in his *Saggio di Contrapunto*, being such as are peculiar to the ecclesiastical modes, will be of little use in secular music. The closes of Haydn, Mozart, and Paisiello, however new, elegant, and ingenious, the treble may be, are all built on the basses and harmony of the old closes of a hundred years ago; for in a full close, as the bass *must* fall a fifth or rise a fourth, the treble *must* either fall from the ninth to the eighth, or rise from the seventh to the eighth.

In early days of counterpoint, the great study of composers was cadences. A Studio of Palestrina being found at Rome in the year 1770, it was chiefly filled with cadences and chants, in his own hand-writing.



In melody, the preparation for closes in the principal part are infinite; in harmony they are numerous, but may be numbered. In Gasparini there is an ample collection, chap. vi. *per far le cadenze d'ogni forte*. From these, Walther has cited many, but more correctly; for Gasparini's book is miserably printed. The cadences in Walther are good, as far as harmony is concerned, which is not so changeable as melody; and to these, chiefly from Gasparini, we have all the Italian names: as *cadenza maggiore, minore, maggiore sinuata, cadenza sfuggita, finita, fiorita, perfetta, imperfetta, irregolare, d'inganno, &c.*

In ancient music, cadence is nearly synonymous with rhythm. The French make use of the term cadence for a trill or shake.

#### OF CONCORDS.

The whole system of harmony is founded on two chords; viz. a fundamental concord, and a fundamental discord: and from these two chords, or roots, arise all others. In a word, the two fundamental chords are the chords of nature; and those derived from them, the chords of art. The fundamental concord may, however, be considered as the real basis of harmony, since to that alone the fundamental discord owes three fourth parts of its existence. But, nevertheless, the two fundamental chords are always considered as distinct, and will be treated accordingly.

##### *Of the fundamental Concord, called the Common Chord, or Triad.*

Any sound may be assumed at pleasure for the primitive or standard note of a piece of music, and is then denominated the *key-note*: and the idea of this note is perpetually impressed on the mind in all simple compositions, both from its frequent recurrence, and from the relation that all the other sounds bear to it. C being the key-note of the scale called *natural*, we shall consider it as the foundation of the scale. The next in importance is the fifth, G, which is intimately connected with the key-note, as it constitutes the most perfect melody and harmony with C, since every alternate vibration of C coincides with every third of G. The fifth, therefore, or G, is called the *dominant*, or governing note. The interval between C and G is most naturally divided by the note E, which answers to the number 5, when C and G are represented by 4 and 6, and which is found among the natural harmonics both of chords and pipes. These three notes, the key-note (or prime), its third and fifth, constitute the harmonic triad, or common chord, in the major scale, which is the *most perfect*, or rather the *only perfect*, harmony; and, in compositions of four, five, six, or more, parts, it can receive no other addition but from the duplicates of its parts. This chord or triad may be either major or minor. The major fundamental triad consists of the prime, major third, and perfect fifth; and constitutes the major mode. The minor consists of the prime, minor third, and perfect fifth; and constitutes the minor mode. This fundamental triad, strictly speaking, is applied as such only on the key-note, or prime; for on any other note of the scale it would at the same time bear a discord joined to it. The different species of triads are shown together at Ex. 20. on the back of Plate IV.

By accompanying this chord in four parts, we add to it the eighth. Its prime, or fundamental, thus becomes the bass, and the third, fifth, eighth, the soprano, alto, or tenor, part. Hence it follows, that the chord may be taken in three different ways by placing either the eighth, fifth, or third, at top, in the middle, or at the bottom. When the eighth is at top, the chord, considered separately from the bass, must be a compound of a third below and a fourth above. When the third is at top, then the reverse will appear; viz. a compound of a third above and a fourth below. And, when the fifth is at top, the chord is equally divided by two thirds, and the parts are of equal distances on keyed instruments. These different

positions, in the major and minor keys, are shown at Ex. 21.

The *imperfect triad* consists of a minor third and extreme flat or imperfect fifth, which latter must regularly resolve by descending to the next degree. It is applied only on the seventh note in the scale of the major mode, and on the second in the minor; this chord is figured thus 5. as at Ex. 22.

Of the different positions of this chord, that is most pleasing in accompaniment where the third lies above. Observe also, when the bass is sharp, the eighth is to be left out.

The *extreme-sharp triad* consists of the prime, a major third, and an extreme-sharp fifth. It is applied only on the third of the minor mode, and always ascends a semitone to the next note. The extreme-sharp fifth is generally prepared on a progressive bass, resolving afterwards to the sixth above it, as in Ex. 23. at A and B.

The two last triads, whereof one consists of a prime, extreme-flat fifth, and major third, and the other of a prime, extreme-flat or imperfect fifth, and an extreme-flat third, never occur in their fundamental position, but are specified among the rest only as being the foundation of some other chords used by inversion, as that of the extreme-sharp sixth, accompanied by  $\frac{4}{3}$ , which is derived from the former, and that of an extreme-sharp sixth, accompanied by  $\frac{5}{3}$ , which is derived from the latter; of which more when we come to speak of inversion.

The common chord in thorough bass is never figured or marked, unless its third or fifth requires an accidental sharp or flat, in which case it is signified thus:  $\times$ , b,  $\sharp$ ,  $\times$ , 5, 5b, 5 $\sharp$ . See Ex. 24. at A and B. or when the discord resolves into a common chord, as at C. or when on the same bass note it is placed between different harmonics, as at D.

Any note not figured in thorough bass, and that is not considered as a passing note, is to be accompanied with a common chord.

Hitherto every common chord has been treated of singly, but now we proceed to the accompaniment of a succession of common chords, the rules relating to the same, as well as to accompaniment in general, are as follows:

1. Two consecutive eighth and fifths in the similar motion, whether gradual or by skips, are to be avoided, chiefly by the use of contrary motion, or now and then by the doubling of a third.
2. Inharmonic relations are likewise to be avoided. By doubling either the unison or third, those unmelodious progressions may be prevented.
3. Of the progressions between the different parts; those between the extremes ought to be the most regular of any.
4. The uppermost part ought to be the most melodious of any; a third is more melodious than a fifth, and a fifth more so than an eighth.
5. Major thirds, whether naturally or accidentally so, generally ascend.
6. The finishing chord, whether it be at the end of a cadence, or at the final conclusion of a piece, should end with an eighth or a third in the upper part, rather than with a fifth.
7. The chords in general are to be taken as near to each other as possible, and not too much space must be left between the hands.

##### *Of the Chord of the Sixth.*

This chord arises from the triad by inversion; for, by substituting the third of the latter for the basis of the former, the fundamental note of the triad is changed to a sixth, and its fifth to a third, as in Ex. 25.

Both chords are but one harmony; as being a combination of the same notes; with this difference only; that the bass note of the triad is a fundamental, and that of the sixth a supposed note only. The sixth in general is accompanied by a third and eighth. Its signature is that of a single



# Chords of the FIFTH & SIXTH.

Pl. V

Ex. 12. 1 2 3 4 5 6 7

Ex. 13. A B C D

## Chords of the THIRD, FOURTH, & SIXTH.

Ex. 14. 1 2 3 4 5 6

## Ex. 16. Chords of the SECOND.

Ex. 15. 1 2 3 4 5 6

Ex. 17.

## Chords by Supposition.

Ex. 18. 7 9 11 13 Ex. 19. 7 9 11 Ex. 20. 7 9 11 13

Ex. 21.

Chords of the SEVENTH.

Ex. 1. A B C D E F G H I

Ex. 2. Ex. 3.

Ex. 4. A B C B D E F G H

Ex. 5. A 7 3 7 8 B 7 8 C 7 b7 D 7 b7

Ex. 6. A B C D E

Ex. 7. Major Mode Minor Mode Ex. 8.

Ex. 9. Ex. 10.

Ex. 11.



a single 6 only, which occasionally, as modulation requires, has the usual marks annexed to it, thus  $\flat, 6, \flat 6$ . According to the observation as above, a sixth in thorough bass always implies the common chord of a third below it; and hence we may easily conclude, that there must be as many different species of sixth chords as there are common chords. See Ex. 26.

There are various ways of accompanying sixes: 1. with a third and eighth; 2. with a third and a double sixth; 3. with a double third; and, 4. with a third only, or a unison doubled. See Ex. 27. The accompaniment with the eighth, like the common chord, has three different positions; for either the sixth, third, or eighth, may be placed at the top, in the middle, or at the bottom. That situation where the sixth is uppermost is the most pleasing, and that with the eighth at top the least so.

The sixes in the chord of the sixth are either major, minor, or extreme sharp; and the thirds, major and minor; and therefore may be divided into the following different classes: 1. The minor sixth accompanied with a minor third. 2. The major sixth accompanied with a major third. 3. The major sixth accompanied with a minor third. 4. The minor sixth accompanied with a major third. 5. The extreme sharp sixth accompanied with a major third.

The minor sixth with a minor third has its place on every major third; that is, on the third, sixth, and seventh, of the major mode, and on the prime, second, fifth, and ascending sixth and seventh, of the minor. Its original harmony is that of the major triad, or fundamental common chord. The major sixth with a major third may be applied to any note that is a third to the minor triad; that is, on the key-note, the fourth and fifth in the major mode; and on the third, the natural or descending seventh and sixth of the minor. Its fundamental harmony is that of the minor triad. The major sixth with a minor third has its place only on the second of the major, and on the fourth of the minor mode. Its original is the imperfect triad. The minor sixth with a major third (the latter being the leading notes in the minor mode) is introduced only on the fifth of that mode, and on that but sparingly. Its original is the extreme sharp triad. The extreme-sharp sixth with a major third is introduced only on the descending sixth of the minor mode, and always ascends to the next note above it. This chord properly arises from a triad that is composed of an imperfect fifth and extreme-flat third. The different manner of accompanying sixes is exhibited in one view at Ex. 28.

#### *Of successive Fifths and Sixes, marked thus, 5 6.*

This signature implies two different chords struck to the same bass note; the 5 implies a common, and the 6 a sixth chord. In compositions in four parts, either the 5th, 6th, or 3d, occasionally may be doubled, as at A. Ex. 29. but in three parts, the 3d only is added, which is the easiest, and, in quick time, the most proper, as at B.

#### *Of successive Sixes and Fifths, marked thus, 6 5.*

The manner of accompanying the chord signified by these figures, is much the same as that of 5 6, the former being only the reverse of the latter; and therefore the succeeding fifth is considered as a passing note, and must descend to the next note below it; but the sixth may be accompanied in all its different ways, as exemplified above. See Ex. 30.

#### *Of the Chords of the Sixth and Fourth accompanied by the Eighth; figured thus, 4.*

As the chord of the sixth arose from the first inversion of the triad, called the common chord, by the substitution of the third of the latter for the basis of the former; so in the same manner that of the sixth and fourth arises from the second inversion of the triad, by substituting the fifth of the latter for its basis note. Therefore, whenever we find a bass note figured with 4, it always implies a triad

to the fourth above or fifth below it. The common chord and its two inversions are shown at Ex. 31.

The following are all the different species of the chord of the 4 that are used in harmony:

1. That which arises from the major triad, consists of a perfect fourth, a major sixth, with its prime or octave; and may be introduced on the key-note, but more particularly on the fifth of the major mode, where it generally implies a cadence.

2. The sixth and fourth that proceeds from the minor triad, consists of a perfect fourth and minor sixth, and is properly applied to the minor mode in the same manner.

3. The chord of the sixth and fourth that arises from the imperfect triad, consists of an extreme-sharp fourth and a major sixth: it is introduced on the fourth of the major and the descending sixth of the minor mode. This fourth frequently resolves into a third on the same bass note when it is accompanied by a 6 doubled, but more frequently in three parts by a single 6 only.

4. That which proceeds from the extreme-sharp triad, consists of an extreme-flat fourth and a minor sixth; and is applied only on the seventh of the minor mode, where it is used by way of transition in the accompaniment of three parts only.

Ex. 32. is calculated for practising the sixth and fourth, as used on cadence-notes on the fifth of the mode, by way of a short prelude to any key.

#### *Of the Chord of the Seventh.*

The chord of the seventh arises from the addition of a third to its common chord, and therefore is compounded of three thirds. According to the different species of intervals contained in the major and minor modes, it may be divided into all different kinds expressed on Plate V. Ex. 1. A, B, C, &c.

1. The minor seventh accompanied by a major third and perfect fifth, is applied on the fifth of either mode, the bass rising a fourth or falling a fifth, and is considered the principal harmony next to that of the fundamental chord of the mode, and decides the key, and whether it is major or minor. See Ex. 2.

2. The minor seventh with a minor third and perfect fifth, is applied on the second, third, and sixth, of the major, and on the prime, fourth, and fifth, of the minor, mode.

3. The minor seventh with a major third and perfect fifth, is introduced on the prime and fourth of the major, and on the third and sixth of the minor, mode.

4. The accidental major seventh with a minor third and perfect fifth, is used only on the prime of the minor mode.

5. The major seventh with a major third and extreme-sharp fifth, is introduced only on the third of the minor mode.

6. The minor seventh with a minor third and imperfect fifth, is applied on the seventh of the major, and on the second and ascending sixth of the minor mode.

7. The extreme-flat seventh with a minor third and imperfect fifth, is used only on the ascending seventh of the minor mode, and consequently its bass note always requires a sharp mark.

These are all the different sevenths used in thorough bass. The two last, marked H and I, are useless in their fundamental position, but are introduced among the rest, as being the foundation of the following chords used in harmony, arising from the inversion thereof. See Ex. 3.

The seventh, like all discords in general, must resolve in the same part of the chord where it happens to be placed, by descending one degree to the next individual; which, according to the different progressions of the bass, may be either a third, fourth, fifth, sixth, seventh, or eighth. It resolves, 1. By a third, when the bass rises a fourth or falls a fifth, as in Ex. 4. where at A, it resolves in the upper part, at B in the middle, and at C in the lower



lower part of the chord. 2. By a fourth, when the bass rises, a third or falls a sixth, as at D. 3. By a fifth, when the bass rises a second or falls a seventh, as at E. 4. By a sixth, when the bass rests on the same degree, as at F. 5. Into a seventh, when the bass falls a second, as at G. 6. By an eighth, when the bass falls a third or rises a sixth, as at H.

The major seventh on the prime of the major mode, descends not only by resolution, but also frequently ascends a semitone to the eighth. See Ex. 5. A. But the accidental major seventh in the minor mode constantly resolves by ascending to the eighth, as at B, except when the bass rises a minor semitone, in which case it descends to an extreme-flat seventh, as at C; which is also to be understood with respect to the major seventh in the major mode, as at D.

The seventh is either prepared or unprepared, but in either case it must resolve. When it is prepared, it must remain on the same degree with the note whereby it was prepared in the preceding chord. In Ex. 6, it is prepared either by a third, the bass rising a fourth or falling a fifth, as at A; by a fifth, the bass falling a third or rising a sixth, as at B; by a sixth, the bass falling a second, as at C; or by an eighth, the bass rising a second or falling a seventh, as at D. But sevenths on the fifth and seventh of the key, in either mode, may be taken unprepared; as at E.

#### *Chords arising from the Seventh by Inversion.*

By inverting the chord of the seventh, so that any other part of the same harmony may be substituted for a bass, instead of its fundamental note, three different chords are produced, as that of  $\frac{6}{5}$ ,  $\frac{4}{3}$ , and  $\frac{2}{1}$ ; where it may be observed, that the same note, which is discord to the fundamental, remains as such in those inverted.

1. By substituting the third out of the chord of the seventh for the bass-note instead of its fundamental to the same harmony, it will be changed to that of the syncopated fifth, accompanied by a third and sixth; figured in thorough-bass thus,  $\frac{6}{5}$ . 2. By substituting its fifth for the bass, the chord will be that of the syncopated chord, accompanied by a sixth and fourth; figured thus,  $\frac{4}{3}$ . 3. Lastly, by substituting its seventh for the bass, the chord will be that of the syncopated second, accompanied by a sixth and fourth; figured thus 2,  $\frac{6}{5}$ , or  $\frac{4}{3}$ . These chords are filled up, both for the major and minor modes, at Ex. 7.

#### *Rules and Remarks concerning the Accompaniment of Sevenths.*

1. The seventh may be accompanied either by  $\frac{5}{3}$  or  $\frac{6}{4}$ , or by a third doubled, according as the regularity of the progression between the different parts may require.

2. Two or more bass-notes figured by sevenths, are accompanied alternately by  $\frac{5}{3}$  and  $\frac{6}{4}$ . See Ex. 8.

3. Sevenths resolving by sixes, are most commonly accompanied by a third and an eighth, or by a double third, as in Ex. 9.

4. The extreme-flat seventh, with its derivatives, are distinguished by the denomination of chromatics. In the regular style every chromatic chord must be qualified by due proportion; but the free or elegant style is not confined to this rule. See Ex. 10.

5. It is chiefly by means of those chords and the changing of the genus; as, for instance, when Ab is changed to G\*, or Eb to D\*; that all those sudden changes of harmony or digressions to the most distant keys, generally made use of in the recitative style, and that of voluntary-playing, are effected. See Ex. 11.

#### *Of the Chord of the Fifth and Sixth, figured thus, $\frac{6}{5}$ .*

The fifth in the present chord, being the same note with its original, the seventh, from which it proceeds by inversion, must resolve like all other discords. Its different species are shown at the back of Plate V. at Ex. 12. fig. 1, 2, 3, &c.

1. The first species consists of an imperfect fifth, a minor

sixth, and a minor third, and is chiefly applied on the ascending seventh of either mode. See Ex. 13. A; and sometimes on the ascending sixth of minor, as at B. The fifth is either prepared, as at C; or unprepared, as at D.

2. The second consists of a perfect fifth, and a major sixth and third; and is applied on the ascending fourth of the major mode. The fifth is always prepared.

3. The third consists of a perfect fifth, and a minor sixth and third; and is introduced on the third and sixth of the major, and on the key-note and fifth of the minor, mode.

4. The fourth consists of a perfect fifth, a minor sixth, and an accidental-sharp third; and is applied only on the fifth of the minor mode.

5. The fifth consists of a perfect fifth, a major sixth, and a minor third; and is introduced on the ascending fourth of the minor mode.

6. The sixth consists of an imperfect fifth, an accidental-sharp sixth, and minor third; and is applied only on the second of the minor mode.

7. The seventh consists of a perfect fifth, an extreme-sharp sixth, and a major third; and is used only on the descending sixth of the minor mode. The two last are chromatic chords. The chord of  $\frac{6}{5}$  in general is used on bass-notes, rising either a whole or half tone.

#### *Of the Chord of the Third, Fourth, and Sixth; figured $\frac{4}{3}$ , or $\frac{6}{5}$ .*

The chord arises from the second inversion of that of the seventh. Its different species, as used in harmony, are as shown at Ex. 14. fig. 1, 2, 3, &c.

1. The first consists of a major sixth, perfect fourth, and minor third, and is applied on the second of either mode; as exemplified in Ex. 15.

2. The second consists of a minor sixth, perfect fourth, and minor third, and is applied on the third, sixth, and seventh, of the major mode, and on the prime of the minor.

3. The third consists of a major sixth, perfect fourth, and major third; and is commonly introduced on the prime and fifth of the major mode, and on the third and descending seventh of the minor.

4. The fourth consists of a major sixth, an extreme-sharp fourth, and a major third; and is applied on the descending fourth of the major, but chiefly on the descending sixth of the minor, mode.

5. The fifth consists of a major sixth, an extreme-sharp fourth, and a minor third; and is applied only on the fourth of the minor mode.

6. The sixth consists of an extreme-sharp sixth, fourth, and major third; and is introduced on the descending sixth of the minor mode.

#### *Of the Chord of the Second, accompanied by 6 and 4; marked $\frac{4}{2} \frac{6}{5} \frac{4}{3}$ .*

In this chord, the bass-note is the discord, it being the same note as that which was a seventh to the fundamental note of the chord it proceeds from, being the third inversion; for which reason, the bass must regularly resolve by descending one degree. The second is used in two different ways; by transition and syncopation. The bass-note figured with a second, descends to the next note below it. The different species of seconds are shown at Ex. 16. fig. 1, 2, 3, &c.

1. The first species consists of a major second, an extreme-sharp fourth, and a major sixth; and is applied only on the descending fourth of either mode. This chord, exclusive of the bass, is a perfect common chord, taken at the distance of a major second from the bass. This will be made clear by inspecting Ex. 17.

2. The second consists of a major second, a perfect fourth, and a major sixth; and is a minor common chord, at the distance of a major second from the bass.

3. The third consists of a minor second, a minor sixth, and a perfect fourth; and is a perfect common chord, taken



# Chords derived from the ELEVENTH.

Ex: 28.

Ex: 29.

Ex: 30.

Ex: 31.

Ex: 32.

Ex: 33.

Ex: 34.

## Chords of the THIRTEENTH.

Ex: 35.

Ex: 36.

(r)

(s)

(t)

(u)

Chords of the NINTH.

Ex: 22.

h. i. k. l. m. n. o. p.

Ex: 23.

(q.) (r.) (s.) (t.) (v.) (w.) (x.) (y.)

Ex: 24.

h. i. k. l. m. n. o. p.

Chords of the ELEVENTH.

Ex: 25.

h. i. k. l. m. n. o. p.

Ex: 26.

h. i. k. l. m. n. o. p.

Ex: 27.

h. i. k. l. m. n. o. p.



taken a minor second above the bass; and is applied on the lower part of the major semitone.

4. The fourth consists of a major second, a perfect fourth, and a minor sixth; being an imperfect common chord; taken a major second above the bass.

5. The fifth consists of an extreme-sharp second, an extreme sharp fourth, and major sixth; and is properly the chord of the seventh, on the fifth of the minor mode.

6. The sixth consists of a minor second, a perfect fourth, and an accidental-sharp sixth; and is a common chord with an extreme-sharp fifth, a minor second above the bass; and is peculiar only to the minor mode.

#### Of CHORDS by SUPPOSITION.

The chords yet remaining for consideration, are the ninth, eleventh, and thirteenth, which, from their extending beyond the limits of an octave, are called *chords by supposition*. These chords, Mr. King observes, are usually constructed by placing one, two, and three, thirds, *underneath* the chord of the seventh. See Ex. 18. As placing sounds *under* one chord to produce another, is inconsistent with the natural principles of sound, which can never gravitate, and also against the direct principles of harmony, which, after establishing a given bass, admits of no lower sound; a particular enquiry will now be made, first, into the present theory, and afterwards into the more probable and natural construction of the chords in question. These objections would not have been considered sufficient to justify any deviation from the theory usually followed, had not the greatest authorities themselves (while they agree in principle) been divided as to the particular construction of these chords.

Rameau, in his "Principles of Music," places two thirds successively under the chord of the seventh on the *sixth* part of the scale, as at Ex. 19. But he goes no farther, perhaps, because he found the chord of the thirteenth would have taken place in the seventh of the scale. If this was his reason, it was quite sufficient. Marpurg and most other harmonists place three thirds successively under the chord of the seventh on the *fifth* part of the scale; as at Ex. 20. Now, the first of these two general systems appears to be the best as far as it goes; because here the ninth is major; but in the second system it is minor, which is not its real character; for, as the second part of the scale stands a whole tone from the first, so the ninth, the true representative of the second, should be also one tone from the octave of the first part of the scale. To this may be added, that Rameau makes use of the wrong fundamental seventh, but produces a true ninth; while Marpurg, who uses the real fundamental seventh, produces an imperfect ninth. The consequence of the disagreement of these two celebrated authorities is, that, as most harmonists follow the opinion of one or the other, two different and indeterminate characters are given to chords which it were to be wished had an unalterable and established theory:

Another system is now presumed to be advanced, entirely different from either of the former, and wholly founded on the principles of VIBRATION, or the natural succession of sounds. See Ex. 21. Here, by adding the vibrations of a given sound regularly as they arise, it directly appears, that the chords, of the ninth, eleventh, and thirteenth, are naturally self-constructed; and that by one, two, and three, thirds, being successively added *over*, and not *under*, the fundamental chord of the seventh. If the seventh of each chord, being flat, should be considered as an objection to this theory, it must be recollected that flat-seventh exists in Nature; and, since the above order of constructing these chords is wholly founded on the analogy of Nature, that very objection becomes an argument in favour of the present system.

#### Of the Chord of the Ninth.

To the ninth belong 3, 5, 7. Plate VI. Ex. 22. shows the different species of ninths. The ninth followed by

any other figure, as 9 8, 9 7, 9 6, 9 5, or 9 3, is accompanied by 5; joined to any other figure, as 7, 8, or 5, it is accompanied with 3. Ex. 23. shows the preparation and resolution of both these kinds. At Ex. 24. all the foregoing chords are prepared and resolved.

#### Of the Chord of the Eleventh, and its Derivatives.

The eleventh, or chord of the fourth, is figured by  $\frac{7}{2}$ , to which belongs 5. The different species are exhibited at Ex. 25. The chord of the eleventh figured thus,  $\frac{9}{2}$ ,  $\frac{7}{2}$ , or  $\frac{9}{2}$ , is accompanied by the fifth. Figured thus,  $\frac{7}{2}$ , it is accompanied by the fourth. Figured thus,  $\frac{7}{2}$ , it is complete in itself. Ex. 26. describes its preparation and resolution. Ex. 27. gives the chords at *h, i, k, l, m, n, o, p*, prepared and resolved. The third from the bass of the eleventh, is used in its first resolution. The ninth from the bass may be figured by a 9, when that interval is uppermost, as *q, s*; but in other cases it is figured by a 2. To distinguish the chord of the eleventh, when in part figured by a 9, from the chord of the ninth itself; it is only necessary to observe, that the former chord must contain a fourth, which the latter chord can never do.

The chords  $\frac{4}{3}$ , and  $\frac{7}{3}$ , are taken out of the eleventh, as at Ex. 28. To the  $\frac{4}{3}$  belongs  $\frac{5}{2}$ ; to the  $\frac{7}{3}$ , belongs 5. The chord  $\frac{4}{3}$  usually takes place on a holding-bass. See Ex. 29. The fourth may resolve by an inversion of the third, or pass into another discord; in either case, the fourth is accompanied by 5. See Ex. 30.

The  $\frac{7}{3}$  generally takes place on the same bass; but the  $\frac{4}{3}$  may stand alone, and be resolved into another discord; in either case,  $\frac{7}{3}$  is accompanied by 5; as in Ex. 31. The  $\frac{4}{3}$  is often used in the perfect cadence.

The chords  $\frac{5}{2}$  and  $\frac{6}{2}$  require no addition, but are complete in themselves, and are derived by inversion from the chord of the eleventh. See Ex. 32. The chord  $\frac{5}{2}$  is generally succeeded by 6, but may be followed by  $\frac{4}{2}$ ; as at Ex. 33. The  $\frac{5}{2}$  is usually followed by  $\frac{6}{2}$ . See Ex. 34. The  $\frac{5}{2}$  resolving into 6 is an inversion of  $\frac{4}{3}$ ; and the  $\frac{6}{2}$  resolving into  $\frac{5}{2}$  is an inversion of  $\frac{7}{3}$ .

#### Of the Chord of the Thirteenth.

The chord of the thirteenth, or discord of  $\frac{7}{2}$ , is figured by  $\frac{6}{2}$ , to which belongs 2. See the different species at Ex. 35. The chord figured thus,  $\frac{7}{2}$ ,  $\frac{9}{2}$ ,  $\frac{7}{2}$ ,  $\frac{6}{2}$ , is complete in itself: at Ex. 36. are their preparation and resolution.

#### PROGRESSION OF THE FUNDAMENTAL BASS.

The progression of the fundamental bass is of such importance, that, without a proper knowledge of its use, it is impossible to be either a correct harmonist or a good composer: for, as the fundamental concord and discord are the foundation of all the derived chords, so the progression and intermixture of the latter chords are entirely ruled and governed by that of the former.

The fundamental bass carries either the perfect concord or the discord of the seventh; which chords may take place in any part of the scale; but in what manner they shall succeed each other is to be determined by positive rules, such rules being absolutely necessary to regulate the use of the derived chords, which are all reducible to the two fundamental chords: for, if the progression of the fundamental bass be regular, the harmony arising from it will be regular also; but, if harmony be reduced to its fundamental bass, and an irregular progression appears, it is then a proof that the harmony has been improperly used.

#### Progressions of the Fundamental Concord.

These progressions are shown on Plate VII. at Ex. 1. from which it appears, that to ascend a third and descend a sixth, or to ascend a fourth and descend a fifth, and so



on, is precisely the same thing. It is irregular for a bass carrying the fundamental concord to ascend or descend *immediately* a second or a seventh, except by licence or omission. But this rule does not imply, that the second or seventh of the scale may not be used as a bass carrying the fundamental concord: on the contrary, they may at all times be used, provided they are regularly introduced and dismissed by one of the progressions in the last Example; and, when other chords intervene, see Ex. 2. Thus, the second of the scale *h k h*, and the seventh *l*, being required as fundamental basses, the progressions *i i i* and *m m* show how they should be introduced and dismissed. The two fundamental basses in question, meet at *h l*, but the progression from one to the other is strictly fundamental. The bass *h u* is both leading and conclusive, and determines the key. Lastly, the bass may ascend one degree, if the second bass carries the fundamental discord, as at *n o*, *p q*; but, as each chord contains a fifth, the fifth in the second chord must descend on the third of the first bass, to avoid two successive fifths.

#### *Progressions of the Fundamental Discord.*

The fundamental discord may either ascend a fourth or descend a fifth into the perfect concord, or else continue that progression with successive chords of the seventh. See Ex. 3. The fundamental discord in progressions must always commence and conclude with the perfect concord, or one of its inversions.

#### *Progressions by Licence, or Omission.*

If the fundamental bass, carrying the perfect concord, ascend or descend one degree, it is by *licence*; because there is always supposed to be an *omitted* fundamental bass between two such chords. See Ex. 4. where, by supposing the bass at *t*, *v*, or *w*, to be between *r s*, the progression at *r s* is allowable. If the fundamental bass, carrying the discord of the seventh, ascends one degree into the perfect concord, as at *x y*, the bass at *z*, which resolves the preceding chord, must be supposed, though omitted. The progressions *r s*, and *x y*, are often used; particularly in the interrupted cadence. The fundamental discord on the seventh of the major scale is permitted to ascend one degree into the perfect concord, as at *h h*, *i i*, since the seventh at *h h* must not be treated as a real seventh, but as an apparent or diminished seventh, which suspends its own fundamental bass. Therefore the seventh at *h h* is considered as a suspension of the  $\sharp$  at *h k*; the fundamental bass of which is that at *l l*. Consequently the progression at *h h*, *i i*, is nothing more than that at *m m*, *m*.

#### *Natural Harmony of the Scale.*

Each part of the diatonic scale, taken as a bass, has some particular chord naturally belonging to it: which constitutes the natural harmony of the scale; for no sooner is any bass determined, than its natural chord, according to this scale, presents itself to the imagination; and upon this principle any determined melody also implies its own bass. Any deviation from the natural harmony of the scale is regulated by the progressions of the fundamental bass. Three parts of the scale are naturally fundamental, viz. the key-note, the fourth, and the fifth. See Ex. 5. The fifth may carry the perfect concord, or the discord of the seventh, according to circumstances. Of the above three fundamental parts of the scale, the chords of all the others, with some few exceptions, are inversions. Although the fourth is a fundamental part of the scale, yet it cannot properly ascend to or descend from the fifth by the perfect concord, that not being a fundamental progression. If then the fourth ascends to the fifth by the perfect concord, as at *h h*, in Ex. 6. or descends from it as, at *h m*, it must be by licence, or by supposition that the notes *i l* are omitted fundamental basses. Therefore, in order to make a proper progression from the fourth to the fifth, another fundamental bass is called into the natural harmony, viz. the discord of the

seventh on the second part of the scale, as at *n*. This discord gives the  $\sharp$  (or its first inversion) to the fourth of the scale at *o*, and consequently produces a regular progression between the fourth and fifth at *o p*. Yet when, according to the received progression of the natural harmony of the scale, the fifth with the perfect concord ascends to the sixth, with the chord of the 6th, as at *q r*; then the fourth of the scale at *v* becomes positively fundamental of the chord at *r*. Therefore the progression *s v*, which is fundamental of *q r*, must be admitted; but this, as before observed, can only be under the supposition of the intermediate bass at *t*. The introduction of a fourth fundamental bass must be considered as temporary, so far as it relates to the natural harmony of the scale; for, when the fourth and fifth parts of the scale do not succeed each other, as at *w x*, the fourth may be regularly used as a fundamental bass. The usual construction of the natural harmony of the major and minor scales, with the fundamental bass of each chord, is shown at Ex. 7. In the progression of either scale descending, the fundamental bass at *w x* leads out of the original key, but which is returned to by the bass *y z*. The natural harmony of the major and minor scales ascending is precisely the same; but in descending their harmonies differ, and the fourth of the scale as a fundamental bass is wholly set aside.

#### OF SUSPENSION, ANTICIPATION, and TRANSITION.

Deviations from the natural harmony of the scale take place by means of fundamental progressions, or their inversions; by chords by supposition; or by suspension, anticipation, or transition.

A chord is *suspended*, when one or more parts of a preceding chord are introduced on the bass of one succeeding. Suspensions take place on the accented part of a bar, and are resolved on the unaccented part. See Ex. 8. In the above instances the suspensions were in the upper parts only; but Ex. 6. will exhibit suspensions in the bass.

A chord is *anticipated*, when one part or more of a succeeding chord is introduced on the bass of the preceding one. Anticipations take place on the accented part of a bar, and their resolutions on the unaccented part. See Ex. 10.

Had not the second chord on each bass been anticipated by notes at *h*, *i*, *k*, *l*, the above progression would have run as in Ex. 11.

If, in passing from any chord to another, one or more intermediate notes are introduced which do not belong to the fundamental harmony, such introduced notes are called *transitions*. Transition is either regular or irregular. Regular transition takes place on the part of the bar or bass to which it belongs. See Ex. 12. The regular transient notes are those at *h*, *i*, *k*, *l*, *m*, *n*, *o*, *p*, *q*, *r*, *s*, *t*. More than one, and even all the upper parts of a chord, may be transient, as at *v w*, and *z y*, in Ex. 13. If all the chords in the example *x y* are lengthened, as at *z*, then the chords themselves become transient.

Irregular transition takes place on the accented part of the bar or bass to which it belongs, and differs from suspension in not being prepared. See Ex. 14. The single irregular transitions are those at *h*, *i*, *k*, *l*; the double irregular transitions, those at *m*, *n*, *o*, *p*; and the transient chords those at *q*, *r*. From what has been said of unaccented and accented transitions, it must be obvious that in such a progression, as at Ex. 15, the notes marked thus ' are transient; and those marked thus ", or thus "", are mixtures of regular and irregular transitions.

Other deviations from the natural scale may be found in great variety in the works of Sebastian Bach, of which we have selected as many as occupy the front of Plate VIII.

#### OF MODULATION.

MODULATION, during the sixteenth century, implied nothing more than a change of voice from one sound to another; but the ingenious citizen of Geneva, more consonant



Progression of the Fundamental Bass.

Ex: 1. Ascend a 3<sup>rd</sup> 4<sup>th</sup> 5<sup>th</sup> 6<sup>th</sup>  
Descend a 6<sup>th</sup> 5<sup>th</sup> 4<sup>th</sup> 3<sup>rd</sup>

Ex: 2. h i k i k i k l m l m n n o p q

Ex: 3. 7 7 7 7 7 7 7

Ex: 4. r s t v w x y z hh ii kk ll mm nn

Ex: 5. Major 7 or Minor 7

Ex: 6. h i k l m n o p q r s t v w y

Ex: 7. Major.   
Scale ascending descending   
Fundamental Bass.

Ex: 7. Minor.   
Scale ascending descending   
Fundamental Bass.

Ex: 8. SUSPENSION.   
5 6 6 7 6 4 3

**Ex: 9.**

[illegible]

## ANTICIPATION.

Ex: 10.

Ex: 10.                      Ex: 11.

h      i      k      l

6 3 4    7 5 2 3    6 4 2    7

7 6 4    7 6 2 3    6 5 3 2    7 4 3

Ex: 11.

Ex: 10.                      Ex: 11.

h      i      k      l

6 3 4    7 5 2 3    6 4 2    7

7 6 4    7 6 2 3    6 5 3 2    7 4 3

TRANSITION.

Ex: 12.

Ex: 12.

h i k l m n o p q r s t

Ex:13.

Ex:13.

The musical notation for Example 13 consists of two staves, treble and bass, in common time (C). The treble staff contains four measures of music. The first measure has a chord of G4 and B4 with fingerings v and w. The second measure has a chord of G4 and B4 with fingering x. The third measure has a chord of G4 and B4 with fingering y. The fourth measure has a chord of G4 and B4. The bass staff contains four measures of music. The first measure has a chord of G3 and B3. The second measure has a chord of G3 and B3. The third measure has a chord of G3 and B3 with fingerings 9, 6, 4, 3, 5, 2. The fourth measure has a chord of G3 and B3 with fingerings 9, 6, 4, 3, 5, 2.

Ex: 14.

Ex. 14. 

Ex: 15.

Ex: 15.

8 6 6 4 2



# MODULATION.

Given Key  
MAJOR

Ex:1. *7 6 5 4 3 2 1*  
1 h i k l 5 m n p q 2

Given Key  
MINOR

*7 6 5 4 3 2 1*  
1 h i k l 5 m n p q 6

Ex:2. Prime. *5* New Key. Prime. *5* New Key. *6 5*  
r s t v w x y z

Ex:3. *7* *7* *5* *7*  
hh ii kk ll

Ex:4. MAJOR MINOR  
h i k l m n o. h i k l m n o

Ex:5. *#* *#*  
t v w x y

Ex:6. *7 4 5 b7* Ex:7. *7 6 4 7*  
z zz hh ii kk ll mm nn oo pp

Ex:8. Fundamental Bass  
(Enharmonic Chords.) (Resolution of the 1<sup>st</sup> Chord.) (Resolution of the 2<sup>d</sup> Chord.)

Recit: Handel.  
Ex:9. He is full of heaviness: thy rebuke hath broken his heart.  
qq rr

# MUSIC.

Plate VIII.

## SCALES by SEBASTIAN BACH.

The image displays ten staves of musical notation, each representing a scale exercise by Sebastian Bach. The notation is written on a five-line staff with a treble clef. The scales are composed of eighth and sixteenth notes, with various fingerings indicated by numbers 1 through 7. Some scales include accidentals (sharps, flats, and naturals) to indicate specific keys or modes. The notation is arranged in a systematic manner, with each staff containing a single scale exercise. The page concludes with a section labeled "Pointe d'Orgue" at the bottom, which features a series of notes and rests, likely a final exercise or a decorative flourish.

Pointe d'Orgue



sonant to present practice in music, defines modulation, "the manner of establishing and treating a key;" but adds, that the word, at present, generally implies the art of conducting melody and harmony, successively, into many keys, in a manner agreeable to the ear, and according to rule. If the key is announced by harmony, it is from harmony that the laws of modulation arise.

Modulation is either natural or abrupt. *Natural modulation* is that which takes place between any key and another directly related to it. *Abrupt modulation*, is a sudden change from one key to another not directly related to it.

#### OF NATURAL MODULATION.

The leading principles of natural modulation may be comprehended under the following heads: A composition should finish in the same key in which it begins; and, if it consist of two or more independent movements, each should do the same. A composition may nevertheless begin in one mode and end in another; that is, it may begin in a minor key and conclude in the major of the same name, or vice versa; this, however, should be considered as a license, not to be taken without some evident reason. In a short composition, modulation is not insisted on, nor even necessary; but then it is proper that the matter be sufficiently interesting to prevent the encroachment of monotony.

Every key has five others related to it, and into either of which it may modulate; thus:

Any major key can modulate into the Any minor key can modulate into the	Major Modulations.					
	2	3	4	5	6	
		3	4	5	6	7
	Minor Modulations.					

} part of its scale.

Thus the major key cannot modulate into its seventh, nor the minor key into its second; as each contains an imperfect or false fifth.

The modulation of any given key, into either of the five keys related to it, may be performed in three different ways: by the discord of the seventh; by the perfect concord; or by the chord of the diminished seventh.

1. *By the seventh and its inversions.*—This modulation may be performed either by the chord of the seventh, on the fifth of the new key, as at *b*, Ex. 1. (on the back of Plate VIII.) or by either of its inversions, as at *i*, *k*, *l*. This shows all the four different ways of modulating. When the modulation takes place by the chord of the  $\frac{2}{5}$ , as at *l*, the resolution of that chord must be on the third of the new key, with the chord of the sixth, as the small note at *m* will show. In this Example will be seen the five relative modulations of the given key at *r*, major and minor. Although the seventh only is marked over the keys, at *n*, *o*, *p*, *q*; it must nevertheless be understood, that the modulations into these keys may also be performed by either of the inversions of that chord, in the same manner as at *h*, *i*, *k*, *l*.

2. *By the perfect Concord.*—When the fifth (*t*, Ex. 2.) of the new key (*v*) is not immediately preceded by the original key (*r*), but by any other note (as at *s*), then the fifth (*t*) may carry the perfect concord; or the fifth of the new key (*x*) may be preceded by the new key-note itself (as at *w*), or by either of its two inverted chords, (as at *y* or *z*.)

3. *By the diminished Seventh.*—Modulations into minor keys may take place by the chord of the diminished or extreme-flat seventh, as at *h*, Ex. 3. or by one of its inversions, as at *h*, *k*; which indeed is almost the same thing as performing the modulation by the real seventh; for, as the diminished seventh is a suspension of its own fundamental bass, so the fundamental bass of *h* and *k* is that at *i* and *l*.

Having shown by what means modulation may be per-

formed, it will be now requisite to show by what rules it is regulated, and how far it may be carried.

The order of modulating from one established key to another, more or less related to it, may be comprehended under the following general heads: The first modulation of a major key is into its fifth; this tone being (in the scale) next in influence to the key. The first modulation of a minor key is into its third major; for this brings the minor key back to the major key on which it is established. The secondary modulations of a major key depend much more on will than on rule; but, before return of the original key, the fourth major and sixth minor are generally introduced. The secondary modulations of a minor key stand nearly in the same circumstances; but its nearest relative keys are always to be preferred. Few pieces, however, of considerable length, confine themselves to relative modulations alone, but go into others apparently extraneous. This happens more especially, when one of the relative keys is considered as a principal; by which a second order of keys arises, collaterally relative to the primary key; or, when the modulation is carried still further, then by regarding one of those collateral keys as principal, a third order of keys presents itself. But such extraneous modulations ought to be admitted with great caution, on account of their extreme distance from the original key; which, if once lost sight of, can only be regained in the following manner: either by modulating to one of its relative keys, or by means of an enharmonic change, or abrupt modulation. Extraneous modulations may, however, be used with great effect; of this, the works of Haydn, Mozart, and other masters, contain many fine instances.

As every key is naturally related to five others, so each of these relative keys can only be considered as one degree, or remove, from the original; consequently, keys which are not relative must be extraneous. As the relative minor of every major key is on the sixth tone above, and not that of the same name; consequently, major and minor keys of the same name are not relative, but extraneous. Therefore, if any major key changes immediately to the minor of the same name, or vice versa, the modulation is not natural, but abrupt.

#### OF ABRUPT MODULATION.

Abrupt modulation is a sudden change from one key to another not immediately related. This modulation may take place either by changing the mode, by omission, or by an enharmonic change.

1. *By changing the Mode.*—If any of the major keys contained in the relative modulations of a given key are changed into minor, or the minor keys into major, the modulation is abrupt. See Ex. 4. The primary or leading key at *h* is supposed to precede the others at *i*, *k*, *l*, *m*, *n*, *o*, immediately; so that every step it takes is abrupt, not even excepting that from *h* to *i*, which bears the same name.

2. *By Omission.*—This kind of modulation supposes some (omitted) chord between two others to connect them together. See Ex. 5. It must be evident that such modulations as those from *t* to *v*, *v* to *w*, *w* to *x*, and from *x* to *y*, can only be admitted by supposing the chords expressed in the small notes to be omitted. This, being the least agreeable of the abrupt modulations, is the least used.

3. *By changing the Name of any given Note.*—This species of abrupt modulation is of the enharmonic scale, and is founded on the chord of the diminished seventh. See Ex. 6. where, by changing the name of the bass of the diminished seventh at *z*, to the other bass *z*, a fourth inversion of a diminished seventh is produced; also by changing the name of the upper part of the inversion of the diminished seventh, as at *h*, a diminished seventh itself is produced at *i*. Although the chords at *z*, *z*, or *h*, *i*, are the same in sound, yet they are not so in sense. See Ex. 7.



The chord at *h h* may either resolve into *l l* or *m m*; but that at *n n* must first resolve into *o o*, before it can pass into *p p*. Again, the fundamental bass of the chord at *h h* is very different from that at *n n*, although the same in sound. See Ex. 8.

Abrupt modulations are much used in recitatives. We shall conclude the subject with a beautiful instance from the oratorio of the Messiah. See Ex. 9. Here the abrupt modulation takes place by changing the minor third in the chord at *q q* into a new bass note at *r r*.

We may observe in general, that no flats or sharps are placed at the clef in recitative; these are all regarded as accidental; nor is Italian recitative ever confined to any one key. Every note has its signature.

#### OF COUNTERPOINT.

The term *counterpoint* originated in the ancient manner of writing notes as mere points, or large dots; where it denoted "point against point," or one part to another. This latter signification it still has in modern harmony, where "writing a counterpoint" denotes the harmonising of a single part, by setting one or more parts to it. The part to be harmonised is called the *subject*, or principal melody; and the parts set to it are the *counterpoint*. But in general the subject and counterpoint are understood collectively, when counterpoint is spoken of, without distinguishing them. And, as a subject harmonised produces a composition in parts, or a harmony; so the term counterpoint, in a more general sense, denotes music in parts, or music in full harmony.

According to the above definitions, harmony or counterpoint may be set either with regard merely to its simple correctness, without the object of rendering the parts invertible; or for the double purpose of rendering the parts invertible, as well as correct. The former is called *simple counterpoint*; the latter, *double counterpoint*.

#### OF SIMPLE COUNTERPOINT.

Simple counterpoint may be divided into *plain* and *figurative*. Both sorts may consist of harmonies of any number of parts; and in any of their forms, the principal melody may be in the highest, lowest, or middle, part, when there are more than two parts.

It will be useful to observe, that what is meant by *strict harmony*, or counterpoint, is a composition which consists of nothing but essential chords and their syncopation; and *free harmony*, is that in which the diatonic and chromatic means are introduced among the essential notes.

*Plain simple counterpoint* consists of notes of the same length. On Plate IX. Ex. 1. is a melody as highest part, to which a bass and two middle parts are to be set. At Ex. 2. the melody is in the bass; and at Ex. 3. in a middle part.

*Figurative simple counterpoint* allows notes of different durations, both in the same part and in different parts of the harmony; as in Ex. 4.

#### OF DOUBLE COUNTERPOINT.

Double counterpoint denotes a composition calculated for inversion; and though, with particular regard to the number of invertible parts, there are not only double, but also treble, quadruple, and greater, counterpoints, every possible inversion of them must be as regular as double counterpoint with any of the invertible parts; for all depends on the knowledge of constructing any two parts of a harmony, so that the lower may be set over the higher, or the contrary. The doctrine of double counterpoint is one of the most important branches of harmony; for it shows how different harmonies can be produced with the same parts on melodies, or how a stricter unity can be combined with most interesting varieties, than by mere simple counterpoint. And these varieties consist either in different states of the same fundamental harmony, as in the counterpoint of the octave, or in differ-

ent fundamental harmonies, as in all the other counterpoints, or also in the intermixture of both parts.

Double counterpoint is to be considered; firstly, with regard to the interval in which the inversion shall take place; secondly, with regard to the number of invertible and other parts; and, thirdly, with regard to the sort of motion in which the inversion shall be introduced.

1. A counterpoint may be calculated for an inversion in one interval only; or in two or more different intervals. And it is called according to its respective interval; viz. a counterpoint of the octave, ninth, tenth, and so forth. But the intervals that exceed a seventh are nothing more than octaves of smaller intervals, as in simple counterpoint. Thus, the ninth is a higher second, the tenth a higher third, &c. A counterpoint of the octave, therefore, admits of an inversion in the octave of the same interval; one of the twelfth, an inversion in the octave of the fifth, and so forth; and the double octave may be used instead of the simple octave where occasion permits.

The general rules in double counterpoint are as follow: 1. The two parts must be calculated so that every interval is treated regularly, both before and after the inversion; and then it is the same thing, whether the inversion is produced by carrying the lower part over the higher, or the contrary. 2. The two parts must not cross each other before the inversion, nor contain any interval greater than that in which the inversion is to take place.

#### Double Counterpoint of the Octave.

This consists of two parts calculated to be inverted, by carrying either of them an octave or double octave towards the other. The rules of it depend on the change of intervals which the inversion produces, according to the following table:

Intervals before the inversion	1	2	3	4	5	6	7	8.
Their inversion in the octave	8	7	6	5	4	3	2	1.

Here it appears, that, by this inversion, the unison produces an octave; the second a seventh, the third a sixth, and so forth. A counterpoint of the octave, therefore, admits of any fundamental or inverted, essential or accidental, interval, that is treated regularly before the inversion, except consecutive perfect fourths; because in the inversion they produce disallowed fifths. Neither ought ninths to be taken, because they cannot be inverted. At *a*, Ex. 5. is a short subject in the higher, and its counterpoint in the lower, part; at *b* is an inversion of it in the octave; and at *c* an inversion in the double octave; *d* is another example of inversion in the octave.

#### Of Double Counterpoint of other Intervals besides the Octave.

These counterpoints may be divided into two classes; viz. principal and derivative. The former are those of the three fundamental intervals besides the octave; viz. the twelfth, tenth, and fourteenth. And the latter are those which arise from the inversion of the three former ones in the octave; viz. the eleventh, thirteenth, and ninth. Both sorts rank in the order in which they are here placed; for an inversion in the twelfth, as octave of the fifth, leaves the transposed melody major or minor as before, and consequently nearest related to its previous state; but an inversion in the tenth, as octave of the third, changes the transposed melody from major to minor, or the contrary, which renders it less related to its previous state than the former inversion; and that in the fourteenth, or octave of the seventh, is still less related to its previous state, because it renders every interval dissonant to its former state; and the same it is with the counterpoints of the eleventh, thirteenth, and ninth.

The general rules are as follows: 1. It produces the same change of intervals, whether the higher part is carried into its respective interval over the lower, or the lower part over the higher; or also when the one part is carried but into its respective simple interval, and the other part



# MUSIC.

Plate IX.

## COUNTERPOINT.

Ex: 1.



Ex: 2.



Ex: 3.



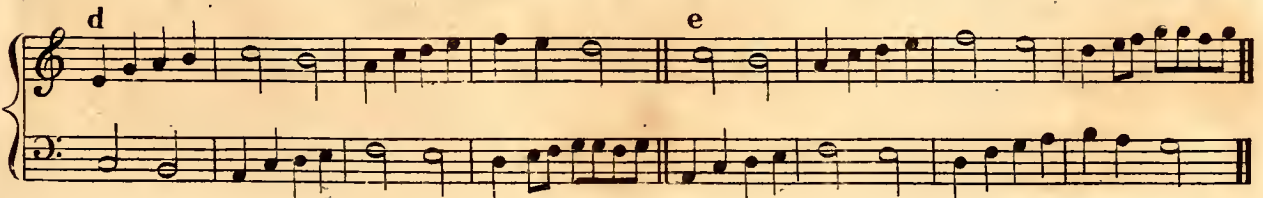
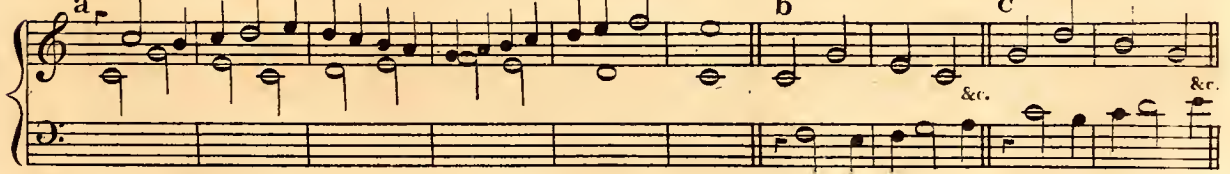
Ex: 4.



Ex: 5.



Ex: 6.



Ex: 7.

Ex: 7. Musical notation for piano accompaniment, featuring two systems. The first system includes a treble staff with a melodic line and a bass staff with a simple harmonic accompaniment. The second system continues the melody and accompaniment. Labels 'a' and 'b' are placed above the first and second measures of the first system respectively. '&c.' appears at the end of the first system and between measures in the second system.

Ex: 8.

Ex: 8. Musical notation for piano accompaniment, featuring two systems. The first system includes a treble staff with a melodic line and a bass staff with a simple harmonic accompaniment. The second system continues the melody and accompaniment. Labels 'a', 'b', and 'c' are placed above the first, second, and third measures of the first system respectively. '&c.' appears at the end of the first system and between measures in the second system.

Ex: 9.

Ex: 9. Musical notation for piano accompaniment, featuring two systems. The first system includes a treble staff with a melodic line and a bass staff with a simple harmonic accompaniment. The second system continues the melody and accompaniment. Labels 'a', 'b', 'c', 'd', and 'e' are placed above the first, second, third, fourth, and fifth measures of the first system respectively.

Ex: 10.

Ex: 10. Musical notation for piano accompaniment, featuring two systems. The first system includes a treble staff with a melodic line and a bass staff with a simple harmonic accompaniment. The second system continues the melody and accompaniment. Label 'a' is placed above the first measure of the first system.

Ex: 11.

Ex: 11. Musical notation for piano accompaniment, featuring two systems. The first system includes a treble staff with a melodic line and a bass staff with a simple harmonic accompaniment. The second system continues the melody and accompaniment. Labels 'a', 'b', 'c', and 'd' are placed above the first, second, third, and fourth measures of the first system respectively. Fingering numbers (1, 2, 3, 4, 5) are indicated below the notes in the second system.



an octave towards it. 2. Some accidental sharps or flats are allowed in the inversion, to preserve the original progression more strictly than could otherwise be done. And the end of an inversion may be altered, if a conclusion on the succeeding harmony require it. 3. Every interval may be used as an accidental one. And those essential ones which cannot be used without certain limitations, may be covered by a diatonic or chromatic gradual progression to and from them.

*Double Counterpoint of the Twelfth or Fifth.*—Two parts calculated to be inverted by carrying either of them a twelfth towards the other, are called a counterpoint of the twelfth. The particular rules of this counterpoint depend on that change of intervals which the inversion produces, as expressed in the following table:

Intervals before the inversion	1	2	3	4	5	6	7	8	9	10	11	12
Their inversion in the twelfth	12	11	10	9	8	7	6	5	4	3	2	1

Here it appears, that, by the inversion, the unison becomes a twelfth, the second an eleventh, and so forth. Hence it follows: First, that all the intervals, except the fourth and the sixth, can be treated in the same manner as in simple counterpoint; but that the fourth and sixth, when inverted, become discords; and therefore ought only to be introduced by a gradual progression in one of the parts. Secondly, that consecutive thirds are good, because they become thirds again. See Ex. 6. where, at *a*, the subject is in the lower, and a counterpoint to it in the higher, part; at *b* is one inversion of the same, by carrying the higher part a twelfth towards the lower; and at *c* the other inversion, by carrying the lower part a fifth towards the higher, and the higher part an octave towards it; at *d* and *e* are farther examples of this kind of inversion.

When this counterpoint is inverted in the octave, either before or after its inversion in the twelfth, it becomes a counterpoint of the eleventh, which may be inverted in both in the same manner as that of the twelfth.

*Double Counterpoint of the Tenth or Third.*—Two parts calculated to be inverted by carrying either of them a tenth towards the other, are called a counterpoint of the tenth. The particular rules of this counterpoint also depend on that change of intervals which the inversion produces, as expressed in the following table:

Intervals before the inversion	1	2	3	4	5	6	7	8	9	10
Their inversion in the tenth	10	9	8	7	6	5	4	3	2	1

Here it appears, that, by the inversion, the unison becomes a tenth, the second a ninth, and so forth. From which it follows: First, that all the intervals, except the fourth, may be treated the same as in the simple counterpoint. Secondly, that the equal motion must be avoided throughout.

Ex. 7. at *a*, is the former subject with a counterpoint to it; and at *b* and *c*, its two inversions in the tenth; *d* and *e* are other examples of the same kind of inversion.

When this counterpoint is inverted in the octave, like the former one, it produces a counterpoint of the thirteenth.

*Double Counterpoint of the Fourteenth or Seventh.*—Two parts calculated to be inverted by carrying either of them a fourteenth towards the other, are called a counterpoint of the fourteenth. The particular rules of this counterpoint again depend on that change of intervals which the inversion produces, viz.

Intervals before the inversion	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Inversion in the fourteenth	14	13	12	11	10	9	8	7	6	5	4	3	2	1

Here it appears, that, by the inversion, the unison becomes a fourteenth, the second a thirteenth, and so forth. From which it follows: First, that all the intervals, except the sixth and the octave, may be treated as in the simple counterpoint. Secondly, that equal motion must be avoided throughout.

Ex. 8. at *a*, is the former subject, with a counterpoint to it; and at *b*, *c*, its inversions in the fourteenth.

When this counterpoint is inverted in the octave, VOL. XVI. No. 116.

like the two former, it produces a counterpoint of the ninth.

*Double Counterpoint of the Eleventh, Thirteenth, and Ninth.*—It has already been shown how this counterpoint arises from the three former ones by the simple process of an inversion in the octave; viz. the counterpoint of the eleventh or fourth, from that of the twelfth or fifth; the counterpoint of the thirteenth or sixth, from that of the tenth or third; and the counterpoint of the ninth or second, from that of the fourteenth or seventh. Whenever, therefore, counterpoints of the eleventh, thirteenth, and ninth, are introduced, they are mere derivatives of the former ones in the same manner as the fourth, sixth, and second, are derivative intervals of the fifth, third, and seventh.

Ex. 9. at *a*, is the original counterpoint, which is invertible in the twelfth, tenth, and fourteenth, and consequently also in their inversions in the octave. At *b*, each part is set one degree farther from the other, which is the same as setting one of the parts a third farther from the other; and consequently, also, the same as if the higher part of it had been the lower, and the two parts inverted in the tenth. At *c*, the higher part of *a* is carried a third higher, and the lower part one degree lower, which is the same as if one of the parts had been carried a fourth from the other; and consequently, the same as if the parts of *a* had been first inverted in the twelfth, and then a double octave back again. At *d*, see the original higher part *a* set a fourth higher, and the lower two degrees lower, which is the same as setting one of the parts a sixth farther from the other; and consequently, also the same as if the counterpoint at *a* had been first inverted in the tenth, and then in the double octave back again. At *e*, the original part is disposed as if one of them had been set a seventh farther from the other, which is the same as if the original higher part had been the lower, and then an inversion had taken place in the fourteenth.

According to the rules of a musical mode, a subject and its counterpoint in any interval may take place on every degree of the diatonic scale; and this produces the different species of every sort of double counterpoint, as well as of its different inversions, in a similar manner as the different species of intervals and chords arise from their taking place on the other degree of the scale.

2. Counterpoint may consist of more than two invertible parts; and others may also be added as mere accompaniments. When it consists of three invertible parts, it is called triple counterpoint; and four invertible parts make a quadruple counterpoint. These are the most useful counterpoints; for quintuple, sextuple, &c. &c. are only used in canons of so many real parts. The inversions for a triple and quadruple counterpoint is calculated for a—First, all possible ones in the octave; and, secondly, those in other intervals. A triple or quadruple counterpoint may be formed in two different ways; viz. first by doubling one or both parts of a double counterpoint in thirds; and, secondly, by giving every part its own melody or progression.

The counterpoints whose parts may be doubled in thirds, are all those invertible in the tenth; either without or with being also invertible in the twelfth or fourteenth. And the principle according to which they may thus be doubled is; that the consecutive tenths or thirds, which the inversion produces to the original counterpoint, have so good an effect, as to admit being added to the original part or parts. But it makes a material difference whether the original parts shall be doubled in thirds only before their inversion in the twelfth, tenth, and fourteenth, or both before and after those inversions; as will appear in the following particulars.

If a counterpoint be doubled in thirds only before its inversion in the twelfth, tenth, and fourteenth, it must be observed: First, that in any counterpoint which is invertible in the tenth, one part may be doubled; viz. the higher part in thirds below, or the lower part in thirds above. Secondly, that, if the said thirds shall be set to



both parts at once, it is necessary to avoid the second, fourth, and sixth, as essential intervals; to use no long accidental intervals; and to avoid the equal motion throughout. But if both parts be doubled in thirds, not only before, but also *after*, their inversion, the following rules must be attended to.

Rule I. If no other intervals are used as essential than the third, fifth, and octave, the thirds may be used, first before the inversion of the counterpoint, and secondly after its two inversions in the twelfth.

Rule II. If no other essential-intervals are used than the third and fifth, the thirds in question may be used, first before the inversion, and secondly after the two inversions in the fourteenth, as well as after those in the twelfth.

Rule III. In all the cases under the two preceding rules, the thirds are added below the higher and above the lower part. But, though no long accidental notes ought to be used, any short essential or accidental note may be set in a gradual progression to and from the allowed principal notes; and the equal motion must be avoided as before.

Rule IV. If both parts should be doubled in thirds after their two inversions in the tenth, the thirds must be set either over both parts or under both. But this produces no other variety than doubling the parts in the former manner after their two inversions in the twelfth.

The varieties of harmony and inversion which can be produced by the doubling of a counterpoint in the described manner are as follows: When one part is doubled in thirds, it produces a triple counterpoint of the octave; and, when both parts are doubled, it produces a quadruple counterpoint of the octave. Each sort may be inverted in the octave as often as the order of its parts one over the other can be changed, as expressed in the following tables.

A triple counterpoint admits of five inversions in the octave; as follows:

1	1	2	2	3	3
2	3	1	3	1	2
3	2	3	1	2	1

A quadruple counterpoint admits of twenty-three inversions in the octave; as follows:

1	1	1	1	1	1	2	2	2	2	2	2	3	3	3	3	3	3	4	4	4	4	4	4
2	2	3	3	4	4	1	1	3	3	4	4	1	1	2	2	4	4	1	1	2	2	3	3
3	4	4	2	2	3	3	4	1	4	1	3	2	4	1	4	1	2	2	3	1	3	1	2
4	3	2	4	3	2	3	4	3	4	1	3	1	4	2	4	1	2	3	2	3	1	2	1

In both the above tables, the first rank of figures shows the three or four original parts, and the other ranks their inversions. Ex. 10. *a*, exhibits a counterpoint that is invertible in the twelfth and tenth; at *b*, thirds are set under the original part; at *c*, thirds over the original lower part; and, at *d*, both at once.

When a counterpoint that has been inverted in the ninth or eleventh is to be rendered triple or quadruple, the thirds must be added on the opposite side; that is to say, above the higher and below the lower part; and in the inversion in the thirteenth they must be added in the same manner as in that in the tenth.

3. The inversions of counterpoints may be calculated for a reverse, a retrograde, and a reverse-retrograde motion. A *reverse motion* is that in which every ascending interval becomes descending, or the contrary. A *retrograde motion*, that which introduces a melody backwards without reversing it. And a *reverse-retrograde motion*, that which introduces a melody both backwards and reversed.

The first, or reverse motion, is very useful, because it produces a fine variety of the harmony and progression without losing sight of the subject. But the two latter motions are considered as a matter of curiosity rather than of utility in practice; because it is very difficult to trace the subject in retrograde or reverse-retrograde motion, except it be very short.

The rules for counterpoint reversed are as follows: 1. Any counterpoint of the octave, tenth, twelfth, or fourteenth, may be reversed before as well as after all its respective inversions, if it contains no discord, except in a transient gradual progression to and from the concords allowed in it. And, if it is calculated to be doubled in thirds, it may also be reversed with those thirds. 2. The reversion must be made in both parts according to the same fixed note, and not according to the different notes with which the two parts of a counterpoint may begin.

At Ex. 11. *a*, the key-note, as a fixed note, is expressed by a large dot. The figures show the different intervals; figure 1 denotes the unison, 3 the 3d, &c. At *b*, see the same reversed. At *c*, the second of the scale is marked by the large dot, as a fixed note; and at *d*, the same is reversed.

#### OF RHYTHM. Plate X.

Music may be considered as consisting of three component parts; melody, harmony, and *rhythm*. Rhythm is an agreeable succession of sounds considered with respect to the time of their whole duration. Melody is an agreeable succession in respect to the pitch, or the frequency of vibrations of each sound. Harmony is an agreeable combination of several sounds at the same time. It is evident that rhythm and melody are almost inseparable; but that harmony is by no means necessary to the existence of music. In the first place, it is easy to conceive that a love of rhythm, or of the periodical recurrence of the same or similar sensations at equal intervals of time, may be derived from the habit of a certain equality and recurrence in the motions of the body, such as walking, or, in children who cannot yet walk, from the passive motion of gestation; this predilection for the return of customary sensations appears to be an innate and fundamental tendency of the human system, to which physiologists and metaphysicians have been obliged ultimately to refer many properties, both of body and mind. But be this as it may, the love of rhythm, which is perhaps the lowest ingredient in musical taste, is, in modern times, still more universal than the love of harmony and melody. Poetry, or rather metrical composition, is distinguished from prose only by the regularity of its rhythm; and the knowledge of metre and prosody, however high it may rank in the critic's estimation, is a subordinate and comparatively insignificant branch of musical science. The natural fondness for rhythm is the principal foundation of the pleasure of dancing, an amusement intimately connected with music, and no less popular. The rhythm of a musical composition is almost always at least two-fold, often three or four fold, consisting of subordinate divisions or bars, and periodical returns of larger members, either phrases or strains, containing equal numbers of those divisions. All this is perfectly natural, but perhaps not so necessary to music as Mr. Walter Young, in his excellent essay, printed in the Edinburgh Transactions, appears to imagine; for those who are already experienced musicians are generally observed to delight in recitative, where the rhythm is almost entirely lost; and still more in fugues, where two or three series of rhythms, almost independent of each other, are carried on at the same time, one part beginning its subdivisions when another has made some progress, and a third is still to follow. But the pleasure derived from such compositions is, as Kirnberger has observed, more intellectual than sensual, arising in a great measure from the consciousness of being able to comprehend that which is "caviare to the general." Rhythm is generally marked in performance by a slight increase of force at the beginning of each subdivision or bar; sometimes, and in some instruments always, the change of sounds, in point of acuteness and gravity, or the interruption of the same sound, is a sufficient distinction; and sometimes, after the rhythm has already been firmly impressed on the mind, neither change of sound nor of strength is perpetually repeated, the imagination alone being sufficient to conceive the continuation of rhythm; but this constitutes a kind



of *tempo rubato*, where the perception of measure is intentionally weakened or suspended. The Æolian harp pleases indeed without rhythm; but the pleasure would soon be exhausted by repetition.

From the strict union of poetry and music among the ancients, which seem to have been almost inseparable, an offence against time or rhythm was unpardonable, as it not only destroyed the beauty of the poetry, but sometimes even the meaning of the words of which it was composed. By the Greeks it was considered the principal point in their music, without which they regarded melody as wholly unmeaning and lifeless. Hence Plato refused the title of musician to every one who was not perfectly versed in rhythm, as we should now to a bad *timist*. It is of such importance, that, without it, music can have no power over the human passions. Pythagoras, according to Martianus Capella, used to call Rhythm in music the *male*, and Melos the *female*; and Doni has compared Rhythm with *design* in painting, and Melos to *colouring*. It is certain that an ordinary melody, in which the time is strongly marked, and the accents are well placed, has more effect than one that is deficient in those particulars, though more refined and uncommon, and set off with all the richness of harmony, and learning of modulation.

Aristides Quintilianus defines musical rhythm "the assemblage of many parts of time, which preserve a certain proportion with each other;" which, since the use of bars in music, may be called aliquot parts of a measure, or a given portion of time. For the better understanding of this definition, it is necessary to remember that the music in question was constantly sung to verses, the words of which were all composed of long and short syllables; that the short syllable was pronounced as quick again as the long; and, the short syllable being regarded as one part or portion of this measure, the long was equal to two; so that, consequently, the found which was applied to the long syllable was equal in duration to two such sounds as were sung to short syllables; or, in other words, that one note was equal to two portions of time, and the other to one. It must likewise be remembered, that the verses thus sung were composed of a certain number of feet, formed by these long and short syllables differently combined, and that the rhythm of the melody was regulated by these feet; as, whatever was their length, they were always divided into two parts, equal or unequal, the first of which was called *ἀγείρις*, "elevation," and the second *θείρις*, "depression." A foot in poetry seems to answer to a bar in music. A time, among the ancients, was a portion of that foot or bar; as, with us, a bar is divided into accented and unaccented parts. In like manner the rhythm of the melody, corresponding with these feet, was divided into two parts, equal or unequal, which we now call the *down* and *up* parts of a bar, expressed by *beating down* the hand or foot, and *lifting it up*. Thus far concerns *vocal* rhythm; what follows belongs to *instrumental*.

As the notes of the ancient music were constantly written over each syllable of the verses which were to be sung; as the quantity of each of these syllables was perfectly known to musicians; and as the duration of each found was regulated by the syllables; it did not seem necessary that the time should be marked by any particular sign or character. However, for the ease and convenience of the musician, a canon, or rule, was given of the rhythm at the beginning of a lyric poem. This canon consisted of nothing but the numbers 1 and 2, that is, the alpha and beta of the Greek alphabet, disposed according to the order of the breves and longs which composed each verse, and divided according to the number of its feet. The alpha, or unit, marked a breve, because it contained only one portion of time; and the beta, or binary, marked a long, being equal to two portions. Some of these poetical or rhythmical canons are still to be found in the *Manual of Hephæstion*.

The Romans had signs for rhythm, as well as the Greeks; and these signs were not only called *numerus*, "number," but *æra*, that is, "the mark for time." *Numeri nota*, says Nonius Marcellus. In this sense we find the word used in a verse of Lucilius: "Hæc est ratio? perversa æra? summa subducta improbe?" Though the word *æra* was at first only applied by musicians to the time, or measure of the melody, they afterwards made the same use of it as of *numerus*, to express the tune or melody itself; and it has been thought that the word *air*, or, as the Italians call it, *aria*, which includes a certain piece of music of a peculiar rhythm, or cadence, is derived from *æra*.

Such was the manner in which the ancients marked the measure in their written music; but, to make it still more sensible in the execution, they beat time in several different ways. The most common was by the motion of the foot, which was lifted up and beat down alternately. To regulate the time was generally the office of the music-master or director, *corypheus*, because he was placed in the middle of the orchestra, among the musicians, and in an exalted and conspicuous situation, in order to be seen and heard the more easily by the whole band. The directors of the time were likewise called in Greek *ποδοκτυποι* and *ποδοψοφοι*, from the noise of their feet. In Latin they were called *pedarii*, *podarii*, and *pedicularii*, for the same reason. Their feet were generally furnished with wooden or iron sandals, in order to mark the time in a more distinct manner; these implements the Greeks called *κρηπίδια*, *κρηπιδία*, *κρηπίδα*, and the Latins *pedicula*, *scabellula*, or *scabilla*, because they resembled little pattens, or clogs. But it was not only with the feet that the ancients beat the time, but with all the fingers of the right hand upon the hollow part of the left; and he who marked the time or rhythm in this manner, was called *manu-ductor*. For this purpose they sometimes used oyster-shells, and the shells of other fish, as well as the bones of animals, in beating time, as we do of castanets, tabors, &c. Both Hesychius and the scholiast of Aristophanes furnish passages to confirm this assertion. What a noisy and barbarous music! all rhythm, and no sound. The drums and systrums of the Idæi Dactyli could not have been more savage.

Many ancient instruments were monotonous, and of little use but to mark the measure; such were the cymbalum and sistrum; and it was for this reason, perhaps, that the cymbal was called *æra* by Petronius. But it would afford us no very favourable idea of the abilities of modern musicians, who should require so much parade and noise in keeping together. The more time is beat, says M. Rousseau, the less it is kept; and, in general, bad music, and bad musicians, stand most in need of such noisy assistance.

However, if any thing like the power which ancient music is said to have had over the passions can be credited, it must have derived this power chiefly from the energy and accentuation of the rhythm. Aristides Quintilianus gives a long list of different metres, with their several properties of calming or agitating the mind, according to the nature of the syllables, or feet of the verses, as well as the sentiments which they were intended to express; and, as it will afford the reader an opportunity of seeing how much stress was laid on this part of music, and how fanciful and ideal many of the distinctions seem to have been, we shall give the whole passage in English. "Measure, which begins by a *down part* of the metrical division, is calm and gentle; whereas, that which begins by an *up part*, expresses trouble and agitation. Full time, that is, always accompanied with melody, is noble in its effect; and that arising from catalectic verses, deficient in a syllable or note, if it be supplied by a rest or pause, has more simplicity. Time of equal proportions, is graceful; and that of odd numbers, or sesquialterate proportion, is more proper to excite commotion. Double time is a kind of mean betwixt the graceful and the turbulent. Among the



the movements of two even notes, if they are short, their effect is lively, impetuous, and proper for military dances, called *Pyrrhics*, in which the dancers are armed; and time of which the movement is regulated by poetic feet composed of long syllables, is more grave, serious, and fit for hymns which are sung in honour of the gods, at festivals, and in sacrifices; the measure composed of a mixture of long and short notes, participates of the qualities of both these last mentioned. Among the duplicate proportions, the Iambic and Trochaic have the most vivacity and fire, and are peculiarly proper for dancing. Those called *ogdies* and *symmetrioi*, of which the artist answers to two long syllables, are full of dignity. Compound measures are more pathetic than simple; and such as are confined to one genus, move the passions much less than those which pass from one genus to another."

After giving these characteristics of time, Aristides proceeds to prove their reality and foundation in Nature, by drawing a parallel between some particular species of rhythm and the gait and actions of man. He pretends, for instance, "that the motion which answers to the Spondaic measure, is a sign of moderation and fortitude; that Trochaics, or Pæans, indicate a greater degree of fire and vivacity; that the Pyrrhic has something low and ignoble in it; that an irregular velocity implies dissoluteness and disorder; and finally, that a movement resulting from all these is wild and extravagant."

With respect to the excellence and effects of ancient music, it is very difficult to steer between the extremes of credulity and scepticism. Such enthusiasts as Aristides Quintilianus, by asserting too much, have thrown a ridicule upon the subject, and inclined us, perhaps, to believe too little. The simplicity of ancient melody, and its slavish dependence upon poetry, may probably have given birth to some of these fancies.

Modern music, by its division into *equal* bars, and its *unequal* subdivision of these bars by notes of various lengths, unites to the pleasure which the ear is by nature formed to receive from a regular and even measure, all the variety and expression which the ancients seem to have aimed at by sudden and convulsive changes of time, and a continual conflict of jarring and irreconcilable rhythms.

Nothing seems more essential to musical pleasure, than the division of melody into equal portions of time, or bars. Quintilian attributed to this natural mensuration of the ear, the first production of poetry: "Poema—aurium mensurâ, et similiter decurrentium spatiorum observatione esse generatum." Hexameters and Iambics appear to have been the most ancient Greek metres; and the latter, if we may credit Horace, (Art. Poet. 255.) were at first *pure* and uncompounded. The mixture of *unequal* feet, and the dithyrambic license of lyric poetry, were later refinements. The progress of musical rhythm was, of course, the same. Plutarch expressly says, in the dialogue de Musica, that the compositions of Terpander, and other old masters, were set to hexameters, chiefly of Homer; that is, they were in regular common time. The change and intermixture of rhythms is spoken of as the innovation of modern artists. Plato rejects these complicated measures from the music of his republic; and even Isaac Vossius, the great champion of ancient rhythm, who asserts that "no man can be a good musician that is not a good drummer," owns, (p. 11.) that "vitiosum et incompositum imprimis, fiet carmen, si duorum, trium, quatuor, pluriumve, temporum pedes, veluti Pyrrichii, Iambi, Dactyli, Pæones, Ioniæ, simul copulentur;" though this is done continually, not only in the lyric part, but even in the dialogue, of the ancient drama.

The Greeks and Romans had but two different degrees of long and short notes; and even the old lozenge and square characters still used in the canto fermo of the Romish church, under the denomination of Gregorian notes, are but of two kinds. The time of these may, indeed, have been accelerated or retarded, but still the same proportion must have been preserved between them; and all

their variety must have arisen from different combinations of these two kinds of notes, such as any two of ours could afford; as semibreves and minims, minims and crotchets, or crotchets and quavers. This accounts for the facility with which even the common people of Greece could discover the mistakes, if any were committed, in the length and shortness of the syllables, both with respect to the poetry and the music, a point of history in which all writers agree; for, besides the intervals peculiar to the melody, rhythm or time must have contributed to characterize the modes, though it has no kind of connexion with our flat and sharp keys; and this gives an idea quite different from what our modern modes taken as keys, and our music in general, furnish. Tartini, upon this subject, says, that we make the prosody subservient to the music, not the music to the prosody; and adds, "that as, by the laws prescribed to the ancient musicians, they were obliged to preserve rigorously in their music the quantity of syllables, it was impossible to protract a vowel, in singing, beyond the time which belonged to a syllable; we, on the contrary, prolong the vowels through many bars, though in reading they are oftentimes short."

Having explained the nature, difference, and properties, of ancient rhythm, Dr. Burney bestows a few words on an examination of the modern, and endeavours to show what it has in common with the ancient, and what peculiar to itself. We no longer know rhythm under its ancient name; however, it has been continued, with a small change of pronunciation, merely to express the final cadence of verses, or the agreement and similarity of sound in the last syllables of two or more lines in poetry; being at present what we call *rhyme*; whereas the proportion subsisting between the different parts of a melody are called *time, measure, movement*. And, when we come to imagine this proportion, we find that it only consists of two kinds, differently modified; and these two are known by the names of *common time*, consisting of equal numbers; and *triple time*, of unequal.

Tartini has deduced all measure from the proportions of the octave and its fifth. "Common time, or measure," says he, "arises from the octave, which is a 1 : 2; triple time arises from the fifth, which is as 2 : 3. These," adds he, "are the utmost limits within which we can hope to find any practicable proportions for melody. Indeed many have attempted to introduce other kinds of measure, which, instead of good effects, have produced nothing but the greatest confusion; and this must always be the case."

Isaac Vossius, in his Dissertation "de Poematum cantu et viribus Rhythmi," has attributed to rhythm all the miraculous powers of ancient music. He adds, that it is now above a thousand years since musicians have lost that great power over the affections which arose only from the true science and use of rhythm; and he accuses modern music of such a want of time and accent, as to be all of one style and colour. We will not defend the age in which Vossius wrote from the charge, nor the music of the present serious opera in France; but the compositions of Italy, Germany, and England, are certainly free from the censure, as music is now more divided into phrases, and sentences, than it was; time is more marked, and more easily felt, than it has ever been since the days of Guido. What it was before, is not very well known; but it is our opinion, that whatever it has comparatively lost in some particulars it has gained in others.

In the present use and practice of rhythm, the branches necessary to be considered are, 1. The Accent. 2. The Foot. 3. The Cæsura. 4. The Phrase. 5. The Section. 6. The Period.

1. OF ACCENT.—The necessity of dividing notes into equal portions of time, called bars, may be shown by considering the series of notes in Ex. 1. This cannot be performed, without making certain divisions on which a pressure, called *accent*, must be laid. It may be accented two ways in equal time; as at Ex. 2. *a, b*. But the same melody



# MUSIC.

Plate X.

## RHYTHM.

Ex: 1.

Ex: 2.

b

Ex: 3.

d

e

Ex: 4.

Ex: 5.

Ac - tor.

Hate - full.

Re - ject.

Ob - serve.

Re - ject.

Ob - serve.

Ex: 6.

Conquest is not to be - stow In the spear or in the bow.

Ex: 7.

Ex: 8.

Ex: 9.

Non

no - bis

Do - mi - ne

non

no - bis

Sed

no - mi - ni

tu -

- o

da

glo - ri - am

Sed

no - mi - ni

tu -

o

da

glo - ri - am

Ex: 10.

5<sup>th</sup>

Key note

Ex: 11.

Ex: 12.

Blow, war - der, blow thy sound - ing horn.

Blow, war - der, blow thy sound - ing horn.

Ex: 13.

Ex: 14.

Ex: 15.

Ex: 16.

and he shall reign for e - ver and e - ver

Ex: 17.

IMITATIONS.

Ex: 18. Ex: 19. Ex: 20. Ex: 21. Ex: 22. Ex: 23. Ex: 24. Ex: 25.

The musical score consists of eight examples, each with a piano (p) dynamic marking. Examples 18 through 24 are in common time (C) and feature a treble staff with a piano part and a bass staff with a piano part. Example 25 is in 6/8 time and features a treble staff with a piano part and a bass staff with a piano part. The examples are arranged in four rows of two. Examples 18 and 19 are in the first row, 20 and 21 in the second, 22 and 23 in the third, and 24 and 25 in the fourth. The notation includes various musical symbols such as notes, rests, and clefs.



melody divided into three crotchets in a bar, admits of three accentual variations; as at Ex. 3. *c, d, e.*

*Emphasis* is distinguished from accent by its occurring on the unaccented part of the bar; by the different grouping of the quavers, semiquavers, &c. and by the mark of *Rf.* (*Rinforzando*) placed over the notes. Accent requires *pressure* after the note is struck; and *Emphasis* force at the time of striking it.

2. Of the FOOT.—A portion of melody, with one principal accent, including the value of a bar, is termed a foot. It has been usual with some authors to apply the names of ancient poetical feet to corresponding musical passages; but the difference between ancient and modern quantity and accent, leaves a doubt concerning the propriety of using the terms of Grecian rhythm. The words, "Actor, Hateful," may be represented in notation several ways, as at Ex. 4.—The words "Reject, Observe," may be represented by opposite rhythm. Ex. 5.

3. Of the CÆSURA.—This word is used for the rhythmic termination of any passage which consists of more than one foot. In other words, the cæsura is the last accent of a phrase, section, or period; and is distinguished by its place in the bar. The utility of this distinction will appear, by considering the two methods in which the music might be composed to the lines

Conquest is not to bestow,  
In the spear or in the bow.

*Dr. Arne's Judith.*

If these bars (see Ex. 6.) were not divided as they are, that is, if the long had begun with the whole-bar instead of the half, the cæsura, which is now properly placed on the accented part (*a*), would have fallen on the unaccented (*b*).

The cæsura is not always the *last* note; the melody is often prolonged after it. See Ex. 7. *a.*

4. Of the PHRASE.—The phrase is a short melody, which is generally formed of two feet, and therefore contains the value of two bars; see Ex. 8. from Beethoven, Op. 2. and it is subject to all the variety of accent that distinguishes the feet of which it is formed.

Considerable difference of opinion arises with regard to this term. Rousseau defines it to be similar to the word *Section*. He distinguishes between phrases in melody and phrases in harmony. Holden uses the term in a general sense, and includes all rhythmic varieties in its definition. The Rev. Mr. Jones, of Nayland, calls them *Clauses*; and considers two similar phrases, following and depending on each other, as antecedent and consequent. Whenever, by repeating one of the feet, or any other variation of the melody, three bars are employed instead of two, the phrase is termed *extended*, or *irregular*. In figurative counterpoint, where fugues and canons are employed, the phrases are interwoven in the different parts. Of this kind of music, the finest specimen now extant is the celebrated *Non nobis, Domine*, by Bird; which will ever remain a lasting ornament to the taste and science of the country in which it was produced. The phrases of this canon are marked with *a* in Ex. 9.

5. Of the SECTION.—A section is a portion of melody formed by two phrases, the last of which is terminated by a cadence. The section may end on the key-note, or on the fifth, according to its final harmony, as in Ex. 10. from Haydn's *Creation*, ("The heavens are telling.") In vocal music, the harmony of a section is protracted for the sake of expressing the words, as in Dr. Callcott's *Glee* of the "Red Cross Knight;" the first section of which, if regular, would have been expressed as in Ex. 11. But to give greater effect to the words "Blow, Warder, blow," the two first notes are augmented to minims; and the section, as written in common time, appears contracted, although it is really extended. See Ex. 12.

The *Codetta*.—A short phrase, or any other passage which does not constitute part of a regular section, but serves to connect one section or period to another, is termed a *codetta*. In the *Duet* of Mozart, the following

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phrase unites the minor period to the original theme. Ex. 13.

The extemporary divisions made at a close by fingers, or solo performers, and termed *cadences*, are all a species of *codetta*. In the repetition of a strain, the passages marked first and second time, generally contain each a *codetta*; the one to lead back to its commencement, the other to lead forward to its continuation. In the *Da Capo* airs of Handel, &c. a *codetta* is generally inserted to lead back to the theme. See Ex. 14. from "O the pleasures of the plains."

6. Of the PERIOD.—A period consists of one or more sections, occasionally interspersed with feet, phrases, or *codettas*. Thus the air of "God save the King" consists of two periods. When one or more periods are terminated by a double bar, they are termed *strains*. The period generally ends with a radical cadence.

Of the CODA.—The concluding passage of many movements, when it occurs after a protracted perfect cadence, is termed the *coda*, i. e. the tail, or final period. The length of the coda may be various; in some pieces it contains several sections, in others merely a single phrase. The short coda at Ex. 15. is from Haydn, Op. 40. In this passage, the two first bars of the coda might be omitted, without injuring the harmony. There is a style of coda peculiar to Italian bravura airs, as may be seen at the conclusion of the chorus in Haydn's *Creation*, "The Heavens are telling." In *rondeaux*, &c. the coda is placed as a separate strain, with the term itself annexed. But, to show what great effects are derived from this addition after the last perfect cadence has been heard, the "Hallelujah Chorus" of the Messiah may be adduced. The last section before the coda, closes the period with the authentic cadence, Ex. 16. This is followed by a coda on the chords of the fourth and key-note, concluding with a plagal cadence, Ex. 17. Such were the simple but sublime notes which occurred to the genius of this truly great composer; and the chorus in which they appear will ever remain a striking memorial of the immortal talents of Handel.

#### OF IMITATION. Back of Plate X.

IMITATION, in its technical sense, is using the same or a similar passage or melody, in many different parts, which are heard one after the other, in the unison, fifth, fourth, third, or in any other interval. Imitation is always pleasing, even if many notes are changed, provided the air is not so disguised as to be no longer recognizable, and the rules of modulation are not violated. Often, in order to render imitation more perceptible, it is preceded by a rest, or by long notes, which seem to extinguish the melody at the very moment when it is renewed by the imitation. Imitations are warrantable at pleasure; they are confined to no particular intervals; they may be continued or changed; or the imitation made in *moto contrario*, or in what way we please. Performers like it better than a dull and dry accompaniment; it renders a part more amusing to the player and important to the hearer. The rules are as relaxed as those of fugue are rigid; for which reason, some great masters disdain imitations from the facility with which they are composed; and, when pursued too closely with the manifest ambition of being particularly noticed, they discover the *young* contrapuntist. Rousseau.

As the octave consists of only eight intervals, imitation must take place, either on the unison, as at Ex. 18. or on the second above or below, Ex. 19. *a, b.* on the third above or below, Ex. 20. *a, b.* the fourth above or below, Ex. 21. *a, b.* on the fifth above or below, Ex. 22. *a, b.* on the sixth above or below, Ex. 23. *a, b.* on the seventh above or below, Ex. 24. *a, b.* or, lastly, on the eighth above or below, as at Ex. 25. *a, b.*

Examples might be given of imitation by contrary and retrograde motion, by augmentation and diminution, &c. but these will be treated of under the heads of Fugue and Canon.



## OF FUGUES. Plate XI.

FUGUE, in Italian *fuga*, from the Latin *fugere*, to fly, is a composition in which the leading part, or first treble, is pursued by the second, the second treble by the tenor, and the tenor by the bass; so that a fugue is a *flight* and a *pursuit*. Rousseau defines a fugue "a piece of music in which a trait of melody, called the *subject*, is treated according to certain established rules of harmony and modulation, in making it pass successively and alternately from one part to another." The subject resembles the *text* of a sermon, out of which all that is said should naturally arise, and serve as a commentary and illustration. But though, for variety, or to indulge caprice, fugues and canons have been composed in all intervals, yet orthodox contrapuntists allow no fugues to be regular, but those of which the answer is made in the fifth, fourth, eighth, or unison, as then the intervals will be the same. And of the *answers*, the preference is given to the fifth, then to the fourth, eighth, and unison; as the effect is pleasing in that order. It must be remembered that the *subject* itself, as of all other movements, should begin on the key-note, its fifth, or its eighth.

Of all kinds of musical composition, the fugue is the only one that hath sustained itself through all the caprices of fashion. Ages have not changed its form; and fugues composed two hundred years ago are as new as those of the present day. See p. 301.

"The art of fugue and double counterpoint," says Mr. Kollman, "has been so much neglected ever since the time of those two greatest fuguists John Sebastian Bach and George Frederic Handel, that at present it is too generally despised, for want of being sufficiently known. And yet nothing in music deserves more to be cultivated than the knowledge of that art. For it teaches how a melody can be harmonised by other melodies; and how the inversion, transposition, and imitation, of melodious parts, produce an abundance of sublime and interesting varieties, which the greatest genius and natural talent cannot make us invent, without such an assistance." And Dr. Burney observes, that, "when Sig. Eximeno calls fugues and canons Gothic compositions, he does not disgrace their structure any more than he would our cathedrals, by calling them Gothic buildings. Let fugues be banished from the theatre and private concert; if he pleases; but let them remain in the church as a distinct species of composition, where they were first generated, and where they can never become vulgar or obsolete. The style is naturally grave, requires musical learning, and will, by the solemnity of the words and place of performance, continue to be revered and respected. It is allowed that variety is more wanted in music than in any other art; and by totally communicating canons and fugues from the church, the art would lose one capital source of variety, as well as ingenuity; and intelligent hearers be bereaved of a solemn style of music, to be heard no-where else."

In the chants of the ancient church, that part of the scale contained between the key-note and its fifth above, was called the *authentic mode*; and the remaining part, contained between the fifth and the key-note, the *plagal mode*. Thus, the authentic mode consists of five notes, and the plagal of four. In the minor key, the sixth and seventh in the plagal mode may be occasionally raised a semitone. Ex. 1. contains a variety of subjects with their answers.

The melody of the answer must exactly correspond with that of the subject. A true modulation, or exact conformity to the key, must be observed. The key-note and fifth must answer each other on the first and last note of the subject and answer. In a skip they must answer each other in the same manner. Different answers may be given to the same subject, according to the key into which the subject is to modulate. To show the difference between a fugue and mere imitation, we have given, from

the MSS. of Mr. Baumgarten, a strict fugue at Ex. 2. *a*, and the same subject in common imitation at *b*.

When the subject and answer have been given, the subject may be repeated by a third part, and answered by the fourth, if there are so many parts; after which, the composer may use either the subject or the answer, or small portions of them, in any key he pleases, and even on different notes. The subjects and answers should become more close and frequent towards the conclusion. In Ex. 3. at *a*, see a subject from Handel, to which, it will be observed, the composer has added a free accompaniment; and at *b* a passage of imitation between the answer and return of the subject, in order to assist the modulation.

The subject, with its answers and repetitions, may be brought at various distances of time, and on various notes of the key, as in Ex. 4. The first note of the subject or answer is frequently shortened or lengthened in the course of the fugue, as in Ex. 5.

A *double fugue* is one in which two or more subjects are used together. The subjects may begin nearly together, at the beginning of the fugue, as at Ex. 6. *a*; (where they are distinguished by the figures 1 and 2.) or the second subject may be introduced in the middle, or towards the latter end, or with the first subject, as at *b*. The four subjects of the chorus, "Let old Timotheus yield the prize," in Handel's *Alexander's Feast*, is exhibited at Ex. 7.

The subject of a fugue is sometimes answered in inversion, reversion, diminution, and augmentation. The subject is answered in inversion in the overture to Esther. See Ex. 8. *a*. In the last movement in the *Messiah*, the subject is answered by reversion; see *b*. An answer by diminution, from the chorus "Let all the angels of God," in the *Messiah*, see at *c*; and an example of augmentation, at *d*.

A holding-note, or *point d'orgue*, may be used either on the key-note, or fifth in the bass; and sometimes first on one and then on the other, for several bars previous to the conclusion of a fugue. See Ex. 9. from the last chorus in the *Messiah*.

## OF CANONS. Plate XII.

A canon is a melody performed by two or more parts, of a score; one of which must begin before the other has finished. The word is Greek, *κανων*, "a rule, or law." A canon, therefore, is a *law* given by one part to another, or to several parts. As nothing is more difficult to compose than canons, so no species of composition has exercised ingenuity, meditation, and labour, in more various ways than the construction of them.

In the unison and octave, they are not only more easy to compose, but are more pleasing to hear; as all other canons are moving in two or three different keys at the same time. But canons that are easy to write, and pleasing to hear, are in no estimation among masters and profound contrapuntists. They have no more respect for a canon in the unison and octave, than a geometer for a sum in addition; they regard canons as musical problems, of which if the solution is easy, they are unworthy of notice. They are, in reality, more calculated to exercise intellect, than delight the auricular sense.

Canons were the last compositions which masters condescended to publish in score. They were regarded as enigmas, which required the deepest sagacity and science to unfold. All the several parts were written on one staff, frequently without specifying when, where, and in what interval, the other parts came in. Sometimes, indeed, the composer was so indulgent as to place this character

over the first note of each of the other parts; but without indicating at what distance from the *proposita*, or subject, or whether above or below it. At other times the performers were told what kind of canon it was, and how resolved, by a Greek or Latin term; that is, on what found the *proposita*,



SIMPLE FUGUES.

Ex:1.

Answer Plagal Subject Plag: Ans: Plag: &c.

Subject Authentic Answer Auth: Sub: Auth: &c.

Plag: Auth: Answer Plag: Auth: &c.

Auth: Plag: Subject Sub: &c.

Ex:2. Fugue

Imitation

Ex:3. a

Subject &c. part of the Sub: &c.

Free Accom: Sub: &c.

Ex:4.

Ans: &c.

Sub: &c.

Ex:5.

Ans: &c.

Sub: &c.

# DOUBLE FUGUES

Ex: 6.

Ex: 6. a

1<sup>st</sup> 2<sup>d</sup> &c. b 1<sup>st</sup> 2<sup>d</sup>

Ex: 7.

Ex: 7.

1<sup>st</sup> 2<sup>d</sup> 3<sup>d</sup> 4<sup>th</sup> &c.

Ex: 8.

Ex: 8. a

Answer by Inversion

b

Reversion

c Subject Diminution

Diminution Subject

d Subject Augmentation

Ex: 9. Subj. Inversion

6 4 3 7 6 4

Holding note on the fifth.

Inver: Sub: Sub: Inver

5 6 7 4 3 6 5 6 &c.

Holding note on the key.



Ex. 10.

Ex. 11.

Ex. 12.

Ex. 13.

Ex. 14.

Ex. 15.

Ex. 16.

## POLYMORPHOUS CANONS.

Ex. 17.

Ex. 18.

**Plate XII.**



*risposta*, or answer, was to be made. If in the 4th, 5th, 8th, &c. the words *diatesseron*, *diapente*, *diapason*, &c. occur. If these terms are used simply and unaccompanied, they generally imply that the answer is made in such interval above; but, if some expletive is not added to the interval in which the answer is made, the performer is uncertain whether it is above or below the text or subject proposed.

Padre Martini says (*Saggio di Contrappunto*) that there are so many canons still preserved of the old ecclesiastical composers, each of which is upon some peculiar construction, that it would require a long treatise even superficially to explain them. A canon that is written and composed in a mysterious and singular manner, is called by the Italians *canone chiuso*; a canon in score, or clearly explained, *canone aperto*. A canon written only on one line, and seemingly in one part or melody, sometimes has its solution pointed out by different clefs and rests at the beginning. In old composers, whether the *risposta* is made above or below the subject, is often determined by the Latin particle *super* or *sub*, or by the Greek *hyper* or *hypo*. So many of the most ancient canons are locked up in the mystery of enigmatical inscriptions or mottos, that the good Padre Martini has collected and explained between fifty and sixty of these oracular decrees: such as

1. Clama ne cesses.
2. Ocia dant vitia.
3. Dii faciant sine me non moriar ego.
4. Omnia si perdas famam servare memento,  
Qua semel amissa, postea nullus eris.
5. Sperari & prestolari multos facit morari.
6. Ocia securis infidiosa nocent.
7. Tarda solet magnis rebus inesse fides.
8. Fuge morulas.

Each of these enigmas implies, that the parts which answer the leader are to pay no attention to the rests, but to sing the notes without them.

The twelve next enigmas imply nothing more than that the first of the two answers begins with the first note of the subject proposed, and advances straight forward to the end; while the second answer begins at the end, and moves backward to the beginning. It is easy enough (says M. Ginguéné) to conceive the difficulty of constructing such canons, and how impossible it is to divine the author's meaning, if some written clue is not given to it; but it is not so easy to conceive what pleasure can result from the execution of such a task, or the merit of taking such great pains for so little pleasure.

Marpurg defines canon, "a musical composition, in which the parts are dispersed according to the rules of imitation."

Composition in plain and florid counterpoint should be studied, and its rules and exceptions well digested, by a musical student, before he attaches himself to fugue and canon, which will make him indifferent about melody, provided, under canonical restrictions, he can make his harmony correct.

All that now remains for us to do, in order to smooth the way in this kind of study when the young composer thinks it expedient to undertake it, is to give a few short specimens of the principal kinds of canons that have been cultivated by great masters of the old school, when nothing else was prized, and all their powers were devoted to that almost exclusively.

Canons may be either 2 parts in 1 melody, viz. two parts performing the same melody, or 3 parts in 1; 4 in 1; 5 in 1; 4 in 2 melodies; 5 in 2, viz. 3 in 1, and 2 in the other; 6 in 2; 7 in 2, viz. 4 in 1, and 3 in the other; 8 in 2; 6 in 3; or 8 in 4. The subject may be answered on the unison; on the octave or fifteenth above or below; on the fourth or eleventh above or below, or on any other note; but the above-mentioned are of the most easy construction. Thus, a canon two in one on the unison, signifies that two parts perform the same melody, both beginning on the same note; three in one on the

fifth and eighth above, means, that three parts perform one melody, the answers beginning respectively a fifth and an octave above the first note of the subject.

For a canon two in one on the unison, see Ex. 1. In framing a canon, write as much of the subject as exists before the answer begins, suppose one bar, as at *a*; then transcribe it into the answer, as at *b*. Compose a similar portion, as at *c*, making a good accompaniment to *b*; then transcribe it to *d*; to which add *e*, *f*, *g*, &c. The distance at which the answer is made is optional. If too far, it will appear flimsy, and possess little merit; if too near, the subject will not be distinguished by the ear, before its answer commences.

Ex. 2. is a canon 2 in 1 on the octave below. Ex. 3. 2 in 1 on the octave above. Ex. 4. 3 in 1 on the eighth and fifteenth below. Ex. 5. 4 in 2 on the eighth below; here are two subjects and two answers. Ex. 6. 2 in 1 on the twelfth below, with modulation or change of key.

A *perpetual canon* is one in which a certain number of bars are marked to be repeated as often as the performers choose, and then the canon is concluded either by a pause over one of the notes; by a double bar; or by a coda, viz. a few bars either in canon or not, as the composer think fit. See one of the former, at Ex. 7.

A *canon by inversion* is one in which the answer consists of the same melody as the subject, but all the motion inverted: where the subject ascends, the answer is to descend; and *vice versa*. Previously to a composition of this sort, the student should make a scale of the subject and answer, the one ascending, the other descending, by similar intervals, as in Ex. 8. where it will be found, that, when the subject begins on the key-note of the major key, an answer on the third or tenth above, or sixth or thirteenth below, will be the most easy to construct. Ex. 9. is a canon 2 in 1 by inversion (or *per arsin et thesin*) on the sixth below. Other preparatory arrangements of scales will be necessary, according to the distance of the answer.

A *canon by augmentation* is one in which the notes of the answer are double the length of those of the subject. Double augmentation is when the notes of the second answer are twice the length of the first, and four times the length of the subject. Ex. 10. is a canon 3 in 1 by augmentation and double augmentation on the unison and fifteenth below.

A *canon by diminution* is when the notes of the answer are half the length of those of the subject. In double diminution, the notes of the second answer are one quarter the length of those of the subject. Ex. 11. is a canon 3 in 1 by diminution and double diminution on the octave above.

Other pieces of music, in which the intervals are not exactly preserved in the answers, have nevertheless obtained the name of canons. Such are melodies that are first played forwards and afterwards backwards. The melody in two parts at Ex. 12. is to be first performed in the usual manner from left to right, and then from right to left, or *per recte et retro*. A melody *alla rovescio* is one which is first performed in the usual way, and then with the paper inverted, as in Ex. 13. The name of canon has also been improperly bestowed on such a melody as Ex. 14. which is first to be performed in the usual way, from left to right, and then from right to left; then the paper is inverted, and the melody performed from left to right, and from right to left; this, however, not producing a full close, the paper must be returned to its former position, and the melody again performed from left to right, and from right to left; and this has been called a canon 3 in 1, *per recte et retro*, and *alla rovescio*.

Modern times have furnished us with some *jeux d'esprit* of this kind. When Haydn was to receive his doctor's diploma at Oxford, he addressed to his judges a sheet of music so composed, that whether read backwards or forwards, beginning at the top, the bottom, or the middle, it always presented an air with an original accompaniment. And the writer of this article has frequently played



played, in the orchestra of Covent-garden theatre, a minuet of Haydn's, which reads the same forwards, backwards, and upside down.

*Rounds* also, or *catches*, have been written in the form of canons, and called such, particularly by the modern Italians. A round is a vocal composition in three or more parts, all written in the same clef, the performers of which are to sing each part in succession, as indicated by the figures at the beginning and end of each line, viz. the first voice is to sing the first, second, and third, parts in succession, and then the first again, &c. The second voice is to begin the first line when the first voice begins the second; and, when the first voice begins the third line, the third voice is to begin the first line, and the second voice the second line. See Ex. 15. That this does not answer the definition of a canon is obvious; yet it is frequently made to resemble a canon in unison, by writing it at full length. But, if the mere following of the parts in the manner of a round constitute a canon; any piece of music may be converted into a canon by performing the parts in rotation.

A *circular canon* begins like any other, and goes as far as one round; but, when it is repeated, the intervals are a little altered, so as to gain an additional sharp or flat, by which means the circle of the twelve keys may be obtained. See Ex. 16.

But the most tremendous of all canons, is the *Canon Polymorphus*, a kind of sacred music composed for several choirs. It seems as if the primitive Christians had had no conceptions more sublime of the employment of the blest in the celestial abodes, than that they were eternally singing. The ancient hymn, "Te Deum laudamus," still retained in the church, appears to have furnished the poet Dante with a model of the 28th canto of his *Paradiso*; where, under three different hierarchies, consisting each of three choirs, or choruses, the heavenly host of cherubim and seraphim are singing perpetual hosannahs. Milton has assigned them the same employment:

"Their golden harps they took:  
Harps ever tun'd, that glittering by their side  
Like quivers hung, and with preamble sweet  
Of charming symphony they introduce  
Their sacred song, and waken raptures high;  
No voice exempt, no voice but well could join  
Melodious part;—such concord is in heaven. *Parad. lost.*

Grazio Benevoli composed, in the 17th century, a mass for the cessation of the plague at Rome, upon the same idea, for six choirs, of four parts each, the score consisting of twenty-four different parts: it was performed in St. Peter's church, of which he was maestro di capella, and the singers, amounting to more than two hundred, were arranged in different circles of the dome; the sixth choir occupying the summit of the cupola.

At Ex. 17. is a canon, composed by Mich. Romanos, for nine choirs in 36 parts. The solution in notes would extend to many plates: the following is a brief description of it.

1st. Choir.—The bass and tenor begin together; the bass as it is written, the tenor at the twelfth above, and by contrary motion. The counter-tenor, after one semibreve rest, begins in the octave above, and the treble begins at the same time by the twelfth above, and by contrary motion.

2d. Choir.—The bass and tenor begin together like the preceding, but after a pause of 2 semibreves. The counter-tenor and treble do the same, after a pause of 3 semibreves.

3d. Choir.—The bass and tenor begin after 4 semibreves rest, and the counter-tenor and treble, after a pause of 5 semibreves.

4th. Choir.—The bass and tenor begin after 6 semibreves, and the counter-tenor and treble after 7 semibreves. The other choirs begin in succession one semibreve after each other, till the whole is finished.

At Ex. 18. is another canon of the same kind, composed by Valentini, for 96 voices and 24 choirs! This canon is called by Berardi *Solomon's Knot*, and by Kircher the *Labyrinth*. The solution is much the same as the preceding. Marpurgh has exhibited one more by the same author, susceptible of 2000 solutions, and upon which Valentini himself has written a large folio volume under the title of *Canonis Musicali*, which was printed at Rome in the year 1655.

Since the printing of p. 291. in which we delivered our opinion on the hammers and anvils of Pythagoras, we have been favoured with the following remarks upon that subject, by a gentleman to whom we are indebted for the exposition of the Greek modes, included in this article at p. 323. Now, although it is of no great import to the musical world to know whether Pythagoras was right or wrong respecting his theory of sounds as grounded upon the different effects of hammers striking on an anvil; yet, as the opinion of a man who deservedly obtained the reputation, and received the name, of the most profound philosopher among a host of learned men at his period of time, ought to be of great weight in the study of abstruse sciences, it would be unfair to keep back any explanation that may help us to the understanding of his system, concerning the generation of sounds or their mutual relation.

It certainly appears ridiculous, *primâ facie*, to suppose, that the different weights of hammers can produce a difference in sound; (see p. 292.) But do we exactly know how the anvils of the ancients were constructed? The name *incus* has no other meaning than its *thema eudere*, "to strike;" and the Greek appellation of *αγκυον* signifies only, that the anvil is indefatigable in bearing the repeated strokes of the hammers. But it is not improbable that *anvil* is derived from *ancile*, "a small round shield," or perhaps *vice-versâ*, *ancile* from *anvil*. Whence we may perhaps conclude, that the *αγκυον* of the Greek resembled in shape the round buckler with a convex surface. In this case, where is the impossibility of the anvil becoming responsive in sound to the respective weights of the hammers? This convexity might have acted like the sounding-board of an instrument. Besides, the comparison which has been adduced between hammers and anvils, and strings and bows, or clappers and bells, does not apply; for, if wine-glasses, for instance, are struck against a key, a candlestick, a decanter, or any other body, they most certainly give various sounds according to their various shapes, capacities, and weights. So that the clapper of a bell in this situation is wrongly compared to the hammer; for in fact, the clapper is the anvil in motion against the steady hammer. Let us place a number of bells, each of a different sound, upon a screw-shaped barrel, and let them strike successively a fixed knob of any hard substance; will they not give the same variety of sounds as if small hammers were set to strike upon them? will they not play the part of clappers and hammers, instead of bells and anvils? The same reasoning applies to strings and bows; which last, upon experiment, will certainly and invariably emit different sounds, according to the different size and length of the cord. Dryden seems to have been of opinion that there exists a sort of *chiming* in the strokes of hammers upon anvils; for, in his translation of the *Æneid* of Virgil, in book viii. v. 593. eager to represent the *harmony* contained in these beautiful lines of the original;

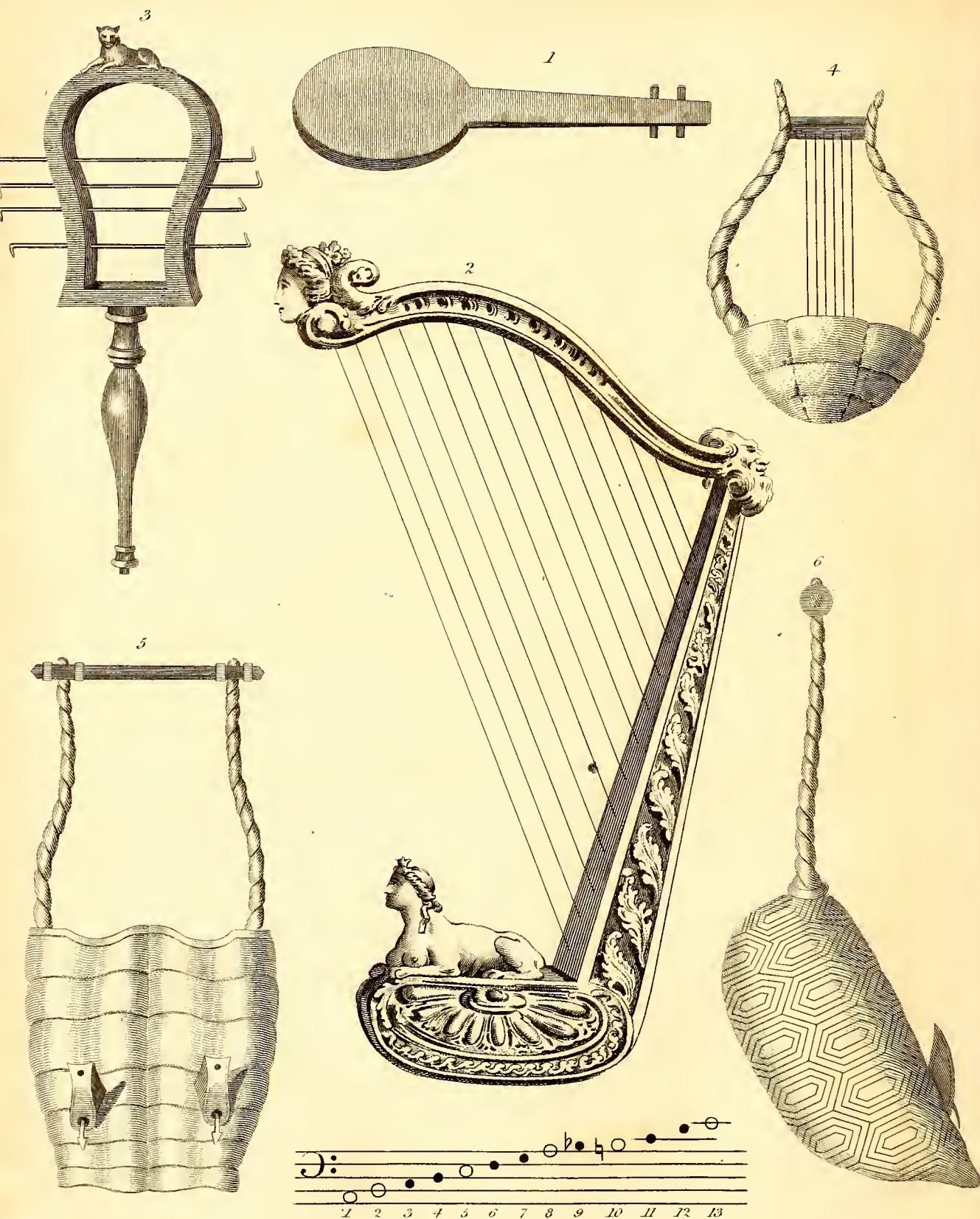
Illi inter sese magnâ vî brachia tollunt,  
In numerum versant-que tenaci forcipe ferrum;

where the cadence is so forcibly expressed, that Pythagoras (could he have anticipated it) might have brought it as a support for his statement; the English poet says,

By turns their arms advance in equal time;  
By turns their hands descend, and hammers *chime*.







*Musical Instruments of the Egyptians.*





subsisting afford ample evidence. In a letter from Mr. Bruce, printed in Dr. Burney's History of Music, there is given a particular description of the Theban harp, an instrument of extensive compass, and exquisite elegance of form. It is accompanied with a drawing taken from the ruins of an ancient sepulchre at Thebes, supposed by Mr. Bruce to be that of the father of Sesostris. We shall insert the account of this instrument, and of the particular situation in which it was found, in Mr. Bruce's own words.

"Behind the ruins of the Egyptian Thebes, and a very little to the north-west of it, are a great number of mountains, hollowed into monstrous caverns; the sepulchres, according to tradition, of the first kings of Thebes. The most considerable of these mountains thus hollowed, contains a large sarcophagus of granite, of which the lid only is broken. In the entrance of the passage which leads, sloping gently down, into the chamber where is the sarcophagus, there are two pannels, one on each side; on that of the right is the figure of the *scarabeus Thebaicus*, supposed to have been the hieroglyphic of immortality; on the left is the crocodile, fixed upon the apsis with his teeth, and plunging him into the waves: these are both moulded in bas-relievo, in the stucco itself. This is a sufficient indication of the grotto, to any one who may wish to examine it again. At the end of the passage on the left-hand, is the picture of a man playing upon the harp, painted in fresco, and quite entire. He is clad in a habit made like a shirt, such as the women still wear in Abyssinia, and the men in Nubia. This seems to be white linen or muslin, with narrow stripes of red. It reaches down to his ankles; his feet are without sandals, and bare; his neck and arms are also bare; his loose wide sleeves are gathered above his elbows; his head is close shaved; he seems a corpulent man, of about fifty years of age, in colour rather of the darkest for an Egyptian. To guess by the detail of the figure, the painter should have had about the same degree of merit with a good sign-painter in Europe; yet he has represented the action of the musician in a manner never to be mistaken. His left hand seems employed in the upper part of the instrument among the notes in alto, as if in an arpeggio; while, stooping forwards, he seems with his right hand to be beginning with the lowest string, and promising to ascend with the most rapid execution; this action, so obviously rendered by an indifferent artist, shows that it was a common one in his time, or, in other words, that great hands were then frequent, and consequently, that music was well understood, and diligently followed. If we allow the performer's stature to be about five feet ten inches, then we may compute the harp, in its extreme length, to be something less than six feet and a half. It seems to support itself in equilibrio on its foot, or base, and needs only the player's guidance to keep it steady. It has thirteen strings; the length of these, and the force and liberty with which they are treated, show that they are made in a very different manner from those of the lyre. I did not choose to embarrass the harp with the figure that is playing on it, because this would necessarily conceal great part of the instrument; and our business is with the instrument, and not with the figure.

"This instrument is of a much more elegant form than the triangular Grecian harp. It wants the fore-piece of the frame, opposite to the longest string, which certainly must have improved its tone, but must likewise have rendered the instrument itself weaker, and more liable to accidents, if carriage had not been so convenient in Egypt. The back part is the sounding-board, composed of four thin pieces of wood, joined together in form of a cone, that is, growing wider towards the bottom; so that, as the length of the string increases, the square of the corresponding space, in the sounding-board, in which the tone is to undulate, always increases in proportion. Besides that the whole principles upon which the harp is constructed are rational and ingenious, the ornamental parts

are likewise executed in the very best manner; the bottom and sides of the frame seem to be veneered, or inlaid, probably with ivory, tortoise-shell, and mother-of-pearl, the ordinary produce of the neighbouring seas and deserts. It would be even now impossible to finish an instrument with more taste and elegance. Besides the elegance of its outward form, we must observe, likewise, how near it approached to a perfect instrument; for it wanted only two strings of having two complete octaves in compass. Whether these were intentionally omitted or not, we cannot now determine, as we have no idea of the music or taste of that time; but, if the harp be painted in the proportion in which it was made, it might be demonstrated that it could scarcely bear more than the thirteen strings with which it was furnished. Indeed the cross bar would break with the tension of the four longest, if they were made of the size and consistence, and tuned to the pitch, that ours are at present.

"I look upon this instrument, then, as the Theban harp, before and at the time of Sesostris, who adorned Thebes, and probably caused it to be painted there, as well as the other figures in the sepulchre of his father, as a monument of the superiority which Egypt had in music at that time, over all the barbarous nations that he had seen or conquered.

"Astronomy, and, we may imagine, the other arts, made a rapid progress at this period in Upper Egypt, and continued to do so for fifty years after; between which time and the Persian conquest some catastrophe must have happened that reduced them to the lowest ebb, which historians have mistaken for their first original.

"We know about the time of Sesostris, if, as sir Isaac Newton supposes, this prince and Sefac were the same, that in Palestine the harp had only ten strings; but as David, while he played upon it, both danced and sung before the ark, it is plain that the instrument upon which he played could have been but of small volume, we may suppose little exceeding in weight our guitar; though the origin of this harp was probably Egyptian, and from the days of Moses it had been degenerating in size, that it might be more portable in the many peregrinations of the Israelites.

"I shall say nothing of the capabilities of this harp, nor what may be proved from it relative to the state of music at a time when men were able to make such an instrument; I shall with impatience expect this detail from you, better qualified than any one I know now in Europe for this disquisition; it is a curious one, and merits your utmost reflection and attention. It overturns all the accounts of the earliest state of ancient music and instruments in Egypt, and is altogether in its form, ornaments, and compass, an incontestible proof, stronger than a thousand Greek quotations, that geometry, drawing, mechanics, and music, were at the greatest perfection when this harp was made; and that what we think in Egypt was the *invention* of arts, was only the beginning of the *era* of their *restoration*."

Dr. Burney, in his remarks upon this letter, calls the Theban harp "the most curious and beautiful of all the ancient instruments that have come to my knowledge. The number of strings, the size and form of this instrument, and the elegance of its ornaments, awaken reflections, which, to indulge, would lead me too far from my chief enquiries, and indeed out of my depth. The mind is wholly lost in the immense antiquity of the painting in which it is represented; indeed the time when it was executed is so remote, as to encourage a belief, that arts, after having been brought to great perfection, were again lost, and again invented, long after this period; and there can be no doubt but that human knowledge and refinements have shared the same fate as the kingdoms in which they have been cultivated. They have had their gradual rise and declension; and in some of the countries first civilized, arts, by the arrival of new invaders, and establishment of new modes, new laws, and



new governments, may be said to have experienced several deaths and regenerations; or, according to the Pythagoric doctrine, their souls may be said to have transmigrated through several bodies, since they have been inhabitants of this world.

“With respect to the number of strings upon this harp, if conjectures may be allowed concerning the manner of tuning them, two might be offered to the reader's choice. The first idea that presented itself at the sight of thirteen strings was, that they would furnish all the semitones to be found in modern instruments within the compass of an octave, as from C to c, D to d, or E to e. The second idea is more Grecian, and conformable to antiquity, which is, that if the longest string represented *proslambanomenos*, or D, the remaining twelve strings would more than supply all the tones, semi-tones, and quarter-tones, of the diatonic, chromatic, and enharmonic, genera of the ancients, within the compass of an octave; but, for my part, I should rather incline to the first arrangement, as it is more natural, and more conformable to the structure of our organs than the second; for, with respect to the genera of the Greeks, though no certain historic testimony can be produced concerning the invention of the diatonic and chromatic, yet ancient writers are unanimous in ascribing to Olympus the Mysian the first use of the enharmonic; and though, in the beginning, the melody of this genus was so simple and natural as to resemble the wild notes and rude essays of a people not quite emerged from barbarism, yet, in after-times, it became overcharged with finical fopperies, and fanciful beauties, arising from such minute divisions of the scale as had no other merit than the difficulty of forming them. Another conjecture concerning the tuning of the thirteen strings of the Theban harp, is, that they furnished the four tetrachords, *hypaton*, *meson*, *synemmenon*, and *diezeugmenon*, with *proslambanomenos* at the bottom, as shown, with the instrument itself, at fig. 2.

“It seems a matter of great wonder, with such a model before their eyes as the Theban harp, that the form and use of such an instrument should not have been perpetuated by posterity; but that many ages after, another, of an inferior kind, with fewer strings, should take place of it; yet, if we consider how little acquainted we are at present with the use, and even construction, of the instruments which afforded the greatest delight to the Greeks and Romans, or even with others in common use in a neighbouring part of Europe but a few centuries ago, our wonder will cease; especially if we reflect upon the ignorance and barbarism into which it is possible for an ingenious people to be plunged, by the tyranny and devastation of a powerful and cruel invader.”

It is but of small importance to us now, perhaps, to know what kind of musical instruments were in use among the Egyptians, in times so remote from our own; indeed, it is a humiliating circumstance to reflect how little permanence there is in human knowledge and acquirements; and, before we attempt to improve our intellects, or refine our reason, how long and laborious a work it is to devise expedients for supplying the wants, and defending the weakness, of our nature. Some ages, and some countries, have been more successful in these endeavours than others; however, there seems to be a boundary set to the sum total of our perfectibility, and, like the stone of Sisyphus, when we are arrived with infinite toil at a certain height, we are precipitated back to the level whence we set off, and the work is to do again!

The Greeks, who lost no merit by neglecting to claim it, unanimously confess, that most of their ancient musical instruments were of Egyptian invention; as the triangular lyre; the monaulos, or single flute; the symbal, or kettle-drum; and the *sistrum*, an instrument of sacrifice, which was so multiplied by the priests in religious ceremonies, and in such great favour with the Egyptians in general, that Egypt was often called, in derision, “the country of *sistrums*,” as Greece has been said to be governed by the lyre.

The *sistrum* is still used by the Abyssinians in religious ceremonies. Spon describes it of an oval form, made in manner of a racket, with three sticks traversing it breadthwise, which, playing freely by the agitation or beating of the instrument, yielded a kind of sound, which, to the ancients, seemed melodious. The upper part was adorned with three figures; that of a cat with a human face in the middle, the head of Isis on the right side, and the head of Nephthys on the left. The representation which we have given at fig. 3. was drawn from an ancient *sistrum* preserved in the library of St. Genevieve at Paris. It has been disputed by the abbé Winckelman, whether the *sistrum* was of very high antiquity in Egypt, because it did not appear in the hands of such Egyptian statues as he had seen at Rome; but, as there is one in the hand of a very ancient statue of Isis which Dr. Pococke brought into England from Egypt, it puts that point of musical history out of all dispute. The *sistrum* appears in the *Isiac Table*; and Apuleius makes an old Greek invoke an Egyptian priest “by the stars in the firmament; by the infernal divinities; by the elements which compose the universe; by the silence of the night; by the sanctuary in the temple of Coptos; by the increase of the Nile; by the mysteries of Memphis; and by the *sistrum* of Pharos.” By Pharos, an Egyptian island, was here figuratively meant all Egypt. Mr. Malcolm takes the *sistrum* to have been no better than a kind of rattle. Jer. Bosius has an express treatise on the *sistrum*, entitled, “*Isiacus de Sistro*.” Oseifus observes, that the *sistrum* is found represented on several medals; and also on talismans. Osiris, on some medals, is painted with the head of a dog, and with a *sistrum* in his hand.

We shall now return to Mr. Bruce, whose original communications, published by Dr. Burney, are extremely valuable.

There are six musical instruments known in Abyssinia; the flute, the trumpet, the kettle-drum, the tambourine, the *sistrum*, and the *lyre*. The four first are used in war, and are by much the most common; the fifth is dedicated to the service of the church; and the sixth is peculiarly an attendant on festivity and rejoicings.

There are two principal languages in Abyssinia: the *Æthiopic*, which is the literal, or dead language; and the *Amharic*, or language of Amhara, spoken by the court.

The *flute*, in the *Æthiopic*, is called *hwetz*, a word difficult to be written or sounded in English: in the Amharic, it is called *agada*. It is about the shape and size of the German flute, but played upon long-ways, with a mouth-piece resembling that of the clarinet; its tone is not loud, but accompanied with a kind of jar, like a broken hautbois; not owing to any accidental defect, but to construction and design, as it would not be esteemed without it. It is probable that the jar arises from the vibration of a reed, which constitutes the difference between the tone of a hautbois and a flute.

The *kettle-drum* is called in both languages *nagareet*, because all proclamations (called *nagar*) are made by the sound of this drum. If made by governors, they have the force of laws in their provinces; but, if made by the king, they are for all Abyssinia; for the kettle-drum is a mark of sovereign power. Whenever the king promotes a subject to be governor, or his lieutenant-general in a province, he gives him a kettle-drum and standard as his investiture. The king has forty-five of these drums always beating before him when he marches. They are in shape and size like ours, only they are braced very disadvantageously; for the skin is strained over the outer rim or lip of the drum, and brought a third down its outside, which deadens it exceedingly, and deprives it of that clear metallic sound which ours has. Each man has but a single drum, upon the left side of his mule, and beats it with a crooked stick about three feet long. Upon the whole, its sound is not disagreeable; and it is heard at an incredible distance.

The third instrument is the small drum, called *kabara*

in Æthiopic and Amharic; though in some parts of Amhara it is also called *hatamo*. It is about half the diameter, and twice the length, of our common drum; it is just the *tambourine* of Provence, only rounded to a point at the lower end. This is beaten always with the hand, and carried sometimes on foot, sometimes on horseback, when any inferior officer (not having a *nagareet*) marches.

The trumpet is called *melket kaset* in Amharic, but *keren* in Æthiopic, (or horn,) which shows of what materials it was anciently formed. It is now made of a cane that has less than half an inch aperture, and about five feet four inches in length. To this long stalk is fixed at the end, a round piece of the neck of a gourd, which has just the form of the round end of our trumpet, and is on the outside ornamented with small white shells; it is all covered over with parchment, and is a very neat instrument. This trumpet has been already spoken of at p. 315.

The fifth instrument is the *sistrum*: it is used in the quick measure, or in allegros, in singing psalms of thanksgiving. Each priest has a sistrum, which he shakes in a very threatening manner at his neighbour, dancing, leaping, and turning round, with such an indecent violence, that he resembles rather a priest of paganism, whence this instrument was derived, than a Christian. See above.

The sixth and last instrument is the *lyre*, which is never played solo, but always accompanying the voice, with which it plays constantly in unison; "*nor did I ever hear music in parts, in any nation, savage or polished, out of Europe*." This is the last refinement music received.—Its construction has been fully described under the article *LYRE*, vol. xiii. p. 840, 1. and its form is shown on the preceding Plate, at fig. 4.

The most ancient representations of the *tesludo*, or lyre, agree very well with the account of its invention. The lyre, in particular on the old celestial globes, was represented as made of the entire shell of a tortoise; and that of Amphion in the celebrated group of the Dirce, or Toro, in the Farnese palace at Rome, which is of exquisite Greek sculpture, and very high antiquity, is figured in the same manner. Dr. Burney had a front and side view of this lyre drawn under his own eye, in order to furnish the reader with an idea of the form given to the instrument by ancient sculptors, upon the strength of this legend. See fig. 5, 6. The two projections near the bottom of fig. 5. seem to have been fastenings for the strings, and to have answered the purpose of tail-pieces in modern instruments. Amphion was the twin-brother of Zethus, who usurped the crown from Laius, the father of the unfortunate Œdipus. But, though Amphion is the first and only Theban musician upon record in these early ages, it is very doubtful whether music had any of those obligations to his genius and talents, which the poets, many ages after the time when he is said to have reigned, bestowed upon him. Homer, indeed, tells us, that, to secure the crown which he had usurped, he inclosed the city of Thebes with a wall, fortified with seven gates, and many stately towers; the poet, however, does not say a word of the miraculous power of Amphion's music, or of his building the wall by the sound of his lyre. Pliny ascribes to him, however, the invention of the cithara; and both these authors say, that Amphion learned music in Lydia; and, bringing it from that country into Greece, was called the inventor of the Lydian mode.

## II. Of the HEBREWS. Plate XIV.

The construction and use of musical instruments have a very early place among the inventions attributed to the first inhabitants of the globe by Moses. See Gen. iv. 21. and p. 288 of this article.

The trumpet of the jubilee is mentioned so soon after the flight from Egypt, that it must have been an Egyptian instrument. See Lev. xxv. 9.

However, in the infancy of a state, a nation has but little leisure for cultivating music any otherwise than as it is connected with religious rites and the military art.

Accordingly, we find no other musical instrument mentioned during the administration of the great Hebrew legislator than trumpets, except the timbrel used by Miriam. Numb. chap. x. 2. he is ordered by divine command to make two trumpets of silver of a whole piece, *for assembling together the people, and for journeying the camps*. And in the eight following verses all the signals to be sounded by one and by two trumpets are regulated. But these instruments seem to differ from that of the jubilee, mentioned before, in nothing but the materials of which they were made; as the Hebrew text, and the several versions, agree in calling them all by one common name.

The trumpets of rams' horns used at the siege of Jericho, seem to have been less musical instruments than military signals for the assailants to march and shout by, in order, by their noise, to terrify and dismay the enemy.

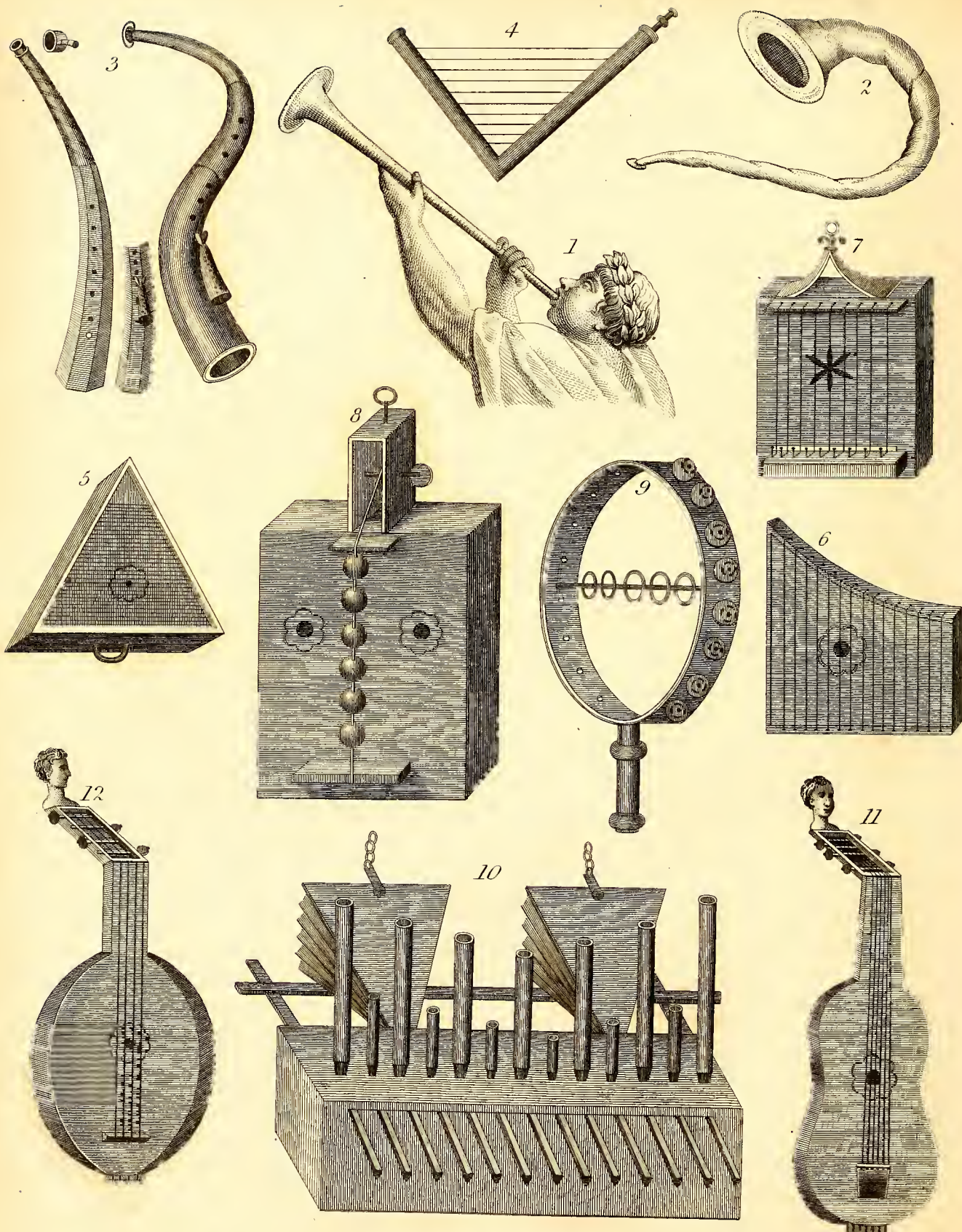
In 2 Sam. vi. 5. we read, that "David, and all the house of Israel, played before the Lord, on all manner of instruments made of fir-wood; even on harps, and on psalteries, and on timbrels, and on cornets, and on cymbals." This is related 1 Chron. chap. xiii. ver. 8. in nearly the same words. But in the different translations these instruments are differently named. In the Syriac we are told, that David and all Israel sung before the Lord, accompanied by the *cithara, psalter, cymbal, and sistrum*. And in the Arabic it is *flutes, cymbals, bells, and harps*. It is worthy of notice, as to the use of fir-wood, mentioned at the beginning of this quotation, that this species of wood, so soft in its nature, and sonorous in its effects, seems to have been preferred by the ancients, as well as moderns, to every other kind, for the construction of musical instruments, particularly the bellies of them, upon which their tone chiefly depends. Those of the harp, lute, guitar, harpsicord, and violin, in present use, are constantly made of fir-wood.

In the fifteenth, sixteenth, and twenty-third, chapters of the First Book of Chronicles, there is a particular account and enumeration of all the musicians appointed by David in the service of the ark, before a temple was erected. 1 Chron. xxiii. 5. David appoints four thousand of the Levites to praise the Lord with instruments; and, chap. xxv. ver. 1. the number of such as were instructed, and were *engaging* in song, is said to have been two hundred fourscore and eight. In 1 Chron. ix. 33. we are told of "the fingers, chief of the fathers of the Levites, who remaining in the chambers, were free; for they were employed in that work day and night." Before this time, it does not appear from the sacred writings, that any other instruments than trumpets, or singing, than in a general chorus of the whole people, were used in the daily celebration of religious rites; though others are mentioned in *processions*, and on occasions of joy and festivity.

It has ever been the custom of legislators and founders of religion, in compliance with the prejudices of mankind, to retain part of the former laws and religious institutions. The Egyptians divided the inhabitants of their country into *castes*, or tribes, confining each profession to one family. And, as music was many ages confined by them to the priesthood, and to religious purposes, the Hebrews, who had their arts and sciences from the Egyptians, and who adopted many of their religious rites, (as the primitive Christians did afterwards those of the Pagans, in order to conciliate parties, and facilitate the establishment of a new worship,) made both priests and musicians *hereditary* in the tribe of Levi. "And the sons of Aaron, the priests, shall blow with the trumpets, and they shall be to you for an ordinance for ever, throughout your generations." Num. x. 8. Accordingly, during the life of Moses, none but the priests blew the trumpets, whether in peace or war; as, afterwards, in Joshua's administration, both at the siege of Jericho, and upon all other occasions, we find the office of blowing the trumpets was still confined to the priesthood; and, when David first regulated the musical establishments for the service of religion, it appears, that, not only the select







*Musical Instruments of the Hebrews.*



band of singing men and singing women, but all the four thousand performers upon instruments, were chosen from the families of priests and levites.

Of the musical instruments of the Hebrews, continually mentioned in the Psalms, so discordant are translators and commentators on the subject, that no precise or satisfactory ideas can be collected for our guidance. Dr. Burney has observed, that almost all the Hebrew instruments are enumerated in the last Psalm; and he has given six different translations of the 3d, 4th, and 5th, verses of that psalm, "to show," as he says, "once for all, that there is no dependence upon any one of them, or any hope that these points can ever be cleared up."

If, indeed, the least ray of hope remain that a true idea of Jewish instruments can ever be acquired, it must be from the arch of Titus at Rome, where it is supposed that the spoils brought by that emperor from Jerusalem have been exactly represented in sculpture. Among these are several musical instruments; particularly the silver trumpets, called by the Hebrews *chatzotzeroth*; and horns, supposed to resemble the shawms, mentioned so often in the Scriptures, called in Hebrew *keranim*, or sacerdotal trumpets. But the arch upon which these instruments are sculptured, though, according to Venuti, of excellent workmanship, was not erected till after the death of Titus; and, to say the truth, the instruments are of no uncommon form. The trumpets are long straight tubes, as modern trumpets would be, if not folded up for the convenience of the player; and the horns are such as frequently occur in ancient sculpture. The subjects on the annexed Plate XIV. are engraved after original drawings, from Titus's arch, from Trajan's pillar, and from bas-reliefs of still more ancient sculpture.

Fig. 1. The *tuba*, or long trumpet, called by the Hebrews the "trumpet of the jubilee." It may be seen in several pieces of ancient sculpture at Rome; particularly on the arch of Titus and on Trajan's pillar. Dr. Burney's representation of it, from which our's is copied, was designed from a bas-relievo of it at the Capitol, representing the triumph of Marcus Aurelius.

Fig. 2. The *buccina*, supposed by some to have been the shell of the Buccinum, or whelk. (See the article CONCHOLOGY, Plate XIII. vol. v.) Others derive it from the Hebrew *buk*, a trumpet. Varro will have it to have been originally formed by onomatopœia, from *bou bou*, alluding to the sound it gives. The *buccina* is usually considered as a species of *tuba*, or trumpet; from which, however, in propriety, it appears to have differed, not only in respect of figure, which in the *tuba* was straight, and in the *buccina* recurved or crooked; but in sound, that of the *buccina* being sharper and audible to a greater distance than the trumpet-sound. The *buccina* approached nearest to the *cornu*, or horn; originally the two seem to have been the same; though in after-times a difference arose; the name *buccinum* being restrained to the smaller forts, and *cornu* to the larger. Some also take the *buccina* to have been less crooked than the *cornu*, which made a full semicircle. Varro assures us, that the *buccinæ* were also called *cornuæ*, horns; because originally made of the horns of cattle, as is still done among some people. Servius intimates, that they were at first made of goats' or rams' horns; and accordingly, in Scripture, the like instruments, used both in war and in the temple, are called "rams-horns," *keren-jabal*; and *sopheroth baidobelim*, or "buccinæ of rams." This instrument was in use among the Jews, to proclaim their feast-days, new moons, jubilees, sabbatic years, and the like. Their use was continued at Greece and in Rome. At Lacedæmon, notice was given by the *buccina* when it was supper-time; and the like was done at Rome, when the grandees had a *buccina* blown both before they sat down to table, and after they rose from their meal.

Fig. 3. The cornet. This was a kind of horn, much in the form of a trumpet. Vegetius informs us, that the legions had trumpets, cornets, and *buccinæ*; that, when

the cornet only sounded, the ensigns, or standard-bearers, were to move forward without the soldiers; but, when the trumpets only sounded, the soldiers were to advance, or move forward, without the ensigns or standard-bearers; that the cornets and *buccinæ* sounded the charge and retreat, and the cornets and trumpets during the battle.

Fig. 4, 5, 6. The harp. Concerning the form of king David's harp we are utterly ignorant, though dissertations have been written upon it, and Calmet has ventured to give it a form. All we know of it is, that it was called *chinnor* in Hebrew, and that the psalmist himself frequently designates it as "an instrument of ten strings." It was probably of a small size, as the player could carry it in his hand, and could at the same time dance at a pretty good rate; (2 Sam. vi. 14, 16.) It may probably have been like the *trigonum*, or triangular harp with ten strings, at fig. 4. copied from an ancient painting in the museum of the king of Naples, in which it is placed on the shoulder of a little dancing cupid, who holds the instrument with his left hand, and plays on it with his right. The *trigonum* is mentioned by Athenæus, lib. iv. and by Julius Pollux, lib. iv. c. 9. According to Athenæus, Sophocles calls it a Phrygian instrument; and one of his dioposophists tells us, that a certain musician of the name of Alexander Alexandrinus was so admirable a performer upon it, and had given such proofs of his abilities at Rome, that he made the inhabitants *μεσομαγειν*, "musically mad." It may not be unworthy of remark, that this little instrument resembles the Theban harp (Plate XIII. fig. 2.) in the circumstance of wanting one side to complete the triangle. The performer too, being a native of Alexandria, as his name implies, makes it probable that it was an Egyptian instrument upon which he gained his reputation at Rome.

Fig. 5. is the *chinnor*, as represented by Kircher from an old book in the Vatican library. It has thirty-two strings.

—Fig. 6. the *nablum*, or nebel. This had strings like the harp, and was played with both hands, and, as some say, with small sticks, like a dulcimer. In the Septuagint and Vulgate, it is called *nablon*, *psalterion*, *lyra*, and sometimes *cithara*. See Calmet's Dissertation concerning the musical Instruments of the ancient Hebrews, prefixed to the second volume of his Commentary on the Psalms. Kircher supposes it to have been a horizontal harp, and that it furnished the first idea of a harpsichord. Baptist Folengius, on the 33d Psalm, says that this instrument was esteemed the most noble of all; because, when the seventy symphonists who blew the trumpet, and played the organs, the cymbals, and the lyre, were assembled to play in concert, the king played alone upon the *nablum*; *Rex solus psalterio regio canebat*.

Fig. 7, 8. The psaltery. We know nothing of the precise form of the ancient psaltery. Kircher has taken pains to prove that it was of a square form; and from an old book in the Vatican library he has given a representation of it, which we have copied at fig. 7.—The *minagghinim*, fig. 8. is another kind of psaltery, for a description of which, see vol. xv. p. 421.

Fig. 9. The timbrel, tabret, or tambour de basque. This instrument is of very high antiquity, and of very general use; having been employed by the Hebrews, Greeks, and Romans. Our figure is taken from the picture of a bacchante, dug out of Herculaneum. Kircher says it was made of metal; to the rim were hung little bells, or loose pieces of metal; and it was furnished with iron rings suspended on a rod or bar that passed across the circle. He supposes that it was moved to and fro by a handle fixed to it, and thus emitted a melancholy kind of murmur.

Fig. 10. The *mafrakitha*, a very curious wind-instrument, our figure of which is copied from the plates of the Encyclopédie méthodique; and of which we have no other description than that already given in vol. xiv. p. 505.

Fig. 11. the *machul*; fig. 12. the *minnin*. These were two instruments of the stringed kind; the former with six strings,



strings, the latter with three or four: though there is great reason to doubt whether instruments which seem to require the aid of a hair-bow, and which so much resemble the violin, can be so ancient. They might, however, have been played with the fingers, like a guitar. See the word MINNIN, vol. xv. p. 540.

### III. Of the GREEKS and ROMANS.

Cadmus, who came into Greece from Phœnicia about 140 years before the Trojan war, brought with him his wife *Harmonia*, who, as *Athenæus* tells us, was "a player on the flute." This relation might encourage a belief, that, as Cadmus brought letters into Greece, his wife brought *harmony* thither, as the word *ἁρμονία* has been said to have no other derivation than from her name; which makes it very difficult to ascertain the sense annexed to it by the Greeks in their music; for it has no roots by which it can be decomposed, in order to deduce it from its etymology. This derivation is given by some to Plato; and there is a passage in his *Phædon*, in which he evidently gives his sanction to the common etymology of the word generally adopted by the learned; who deduce it from *ἁρμωζω*, which is derived from the old verb, *ἄρμω*, "to fit, to join." And yet, as the flute upon which *Harmonia* played was a single instrument, capable of *melody only*, and as she was said to be the first who performed upon that instrument in Greece, the inhabitants of that country perhaps called by her name the art which she had introduced among them, as the metal (copper) which her husband invented received his name. *Agenor*, the father of Cadmus, was an Egyptian; and Cadmus is said by many ancient writers to have received his education in Egypt. *Harmonia* may likewise have come from that country; however, her wild flute has never been said to have furnished the Greeks with their musical scale; but there is nothing more extraordinary in a barbarous people having music without a gamut, than language without an alphabet.

*Diodorus Siculus* has given a very circumstantial account of the wedding of Cadmus and *Harmonia* in *Samothece*, at which all the Pagan divinities were present; and tells us, that this was the first hymenæal festival which the gods deigned to honour with their presence: "Cercus, who was tenderly attached to Jasion, the brother of the bride, presented corn to the new-married couple; Mercury brought his lyre; Minerva, her famous buckler, her veil, and her flute; *Electra*, the mother of the bride, celebrated there the mysteries of *Cybele*, the mother of the gods, and had the orgies danced to the sounds of drums and cymbals. Apollo afterwards played on the lyre, the Muses accompanied him with their flutes, and all the other divinities ratified their nuptials with acclamations of joy." This seems to be the outline of a dramatic representation, which was perhaps exhibited by the priests at some festival, or mystical celebration, in order to commemorate the wedding of Cadmus and *Harmonia*.

But, though Cadmus and his companions were called *Idæi Daëtyli*, and *Curetes*, they seem not to have been the first who came into Greece; for both *Strabo* and *Diodorus Siculus* tell us, that "the *Curetes*, who introduced music, poetry, dancing, and arts, and attended on the sacrifices, were no less active about religious institutions; and for their skill, knowledge, and mystical practices, were accounted wise men and conjurers by the vulgar; that these, when Jupiter was born in Crete, were appointed by his mother *Rhea* to the nursing and tuition of him in a cave of mount *Ida*, where they danced about him in armour, with great noise, that his father Saturn might not hear him cry. And, when he was grown up, these assisted him in his conquests, were appointed his priests, and instituted mysteries, in memory of the share which they had in his education." This wild story, collected from all the best prose-writers of Greece, is told by *Isaac Newton* in his *Chronology*; and it is quoted here,

in order to show the simple state which music was in at its first introduction into Greece.

No instruments are mentioned to have been used by the *Idæi Daëtyli*, who attended Jupiter in Crete, but drums and cymbals, instruments of percussion, which, affording but one tone, require but little art in the player, or knowledge in the hearer:

*Diætaos referunt Curetas: qui Jovis illum  
Vagitum in Creta quondam occultasse feruntur;  
Cum pueri circum puerum pernice chorea  
Armati in numerum pulsarent aribus ara.* Lucret. ii.

These represent the armed priests, who strove  
To drown the tender cries of infant Jove;  
By dancing quick they made a greater sound,  
And beat their armour as they danc'd around. Creech.

But *Virgil* applies this rude and artless music to a less noble purpose than quieting the infant Jupiter in his cradle:

*Nunc age, naturas apibus quas Jupiter ipse  
Addidit, expediam: pro qua mercede, canoras  
Curetum sonitus erepitantique ara seentæ,  
Diætao eali regem pavere sub antro.* Georg. iv.

Now listen, while the wond'rous powers I sing,  
And genius giv'n to bees, by heav'n's almighty king,  
Whom, in the Cretan cave, they kindly fed,  
By cymbal's sound and clashing armour led. Warton.

*Aristotle* has thought it worth recording, that *Archytas* of Tarentum, the famous mathematician, invented a rattle for children; and *Perault* says, if we consider the music of the ancients according to the idea which the early writers give us of it, we shall find it to have been a kind of noise suitable to the *infancy* of the world, as the first instruments were certainly little better than rattles, or corals, fit only for children. And, indeed, the Phœnicians may be said to have brought into Greece *time*, rather than *tune*: but *rhythm* is of such consequence both to poetry and to music, that this was no inconsiderable present.

As the first music mentioned in the Grecian history, is that of the *Idæi Daëtyli*, after the birth of Jupiter, which consisted of a rhythmical clash of swords, as modern morrice-dancers delight in the clash of staves; it is not unnatural to suppose, that when this prince was grown up, had conquered his enemies, and was peaceably established on his throne, the arts and sciences were cultivated and rendered flourishing, particularly music, through the skill and influence of *Apollo*, and his other sons; and this perhaps was found to be the most effectual means of taming and polishing a rude and savage people.

Among the *dii majorum gentium*, some of the female divinities laid claim to a share in musical discoveries. Of this number was *Minerva*, or *Pallas*, the daughter of Jupiter, who is sometimes called *Musica*, or the Musician, a name she acquired from her statue made by *Demetrius*, in which, when the serpents of the Gorgon were struck, they resounded like a lute. She is also honoured with the invention of chariots, together with having first used trumpets, and invented the flute. The vouchers for her musical talents are *Pausanias*, *Plutarch*, and *Fulgentius*, among the prose-writers; and *Pindar*, *Nonnus*, *Ovid*, *Hyginus*, *Propertius*, and *Claudian*, among the poets. The flute that she invented, is said by *Hyginus* to have been made of bone, and by *Ovid* of box:

*Prima terebrato per rara foramina buxo,  
Ut daret, efficit, tibia longa sonos.* Fast. vi.

*Foramina rara*, "with few holes," it is natural to suppose. Indeed the *syrtinx*, said to have been invented by *Pan*, whose shape is now well known under the vulgar appellation of *Pan's pipes*, was found inconvenient. It consisted of a number of pipes of different lengths, tied together, or fastened by wax, which were played on, according to *Lucretius*, by blowing in them one after the other, moving



moving the instrument sideways for the admission of wind into the several tubes; and it was by the sagacity and penetration of Minerva, that it was found practicable to produce the same variety of tones with a *single pipe*, by means of *ventiges* or holes, which had the effect of lengthening or shortening the tube, by a quick alteration of the column of air which was forced through it.

Two other circumstances are related of Minerva with respect to the flute. She is said by Hyginus to have found herself laughed at by her mother and sister, Juno and Venus, whenever she played the flute in their presence: this suggested to her the thought of examining herself in a fountain, which, serving as a mirror, convinced her that she had been justly derided for the distortion of her countenance, occasioned by swelling her cheeks in the act of blowing the flute. This is one reason given for her throwing aside that instrument, and adopting the lyre. However, a better cause, and one more worthy of her wisdom, is assigned for her throwing aside the flute, upon seeing Apollo perform on the lyre; for, by having his mouth at liberty, she found that it enabled him to sing at the same time as he played, which afforded an opportunity of joining instruction to pleasure.

Having traced the use of instruments of percussion as high as the birth of Jupiter, and shown that the ancient Greeks attributed the origin of wind-instruments to Minerva, it now remains to speak of the third species of instruments, the tones of which are produced by strings; and among these, the first in order and celebrity is the lyre, of which the invention is given, both by the Egyptians and Greeks, to Mercury.

Almost all the ancient poets relate the manner in which the Grecian Mercury discovered the lyre; and tell us that it was an instrument with *seven strings*; a circumstance which makes it essentially different from that said to have been invented by the Egyptian Mercury, which had but *three*. However there have been many claimants besides Mercury to the seven-stringed lyre; and the great number of different musicians to whom the same inventions have been given in Greece, is but a proof that instruments resembling each other in form and properties, may have had many inventors. A *syrix*, made of reeds tied together, exactly resembling that of the ancients, has been lately found to be in common use in the island of New Amsterdam in the South Seas, as flutes and drums have been in Otaheite and New Zealand; which indisputably prove them to be instruments natural to every people emerging from barbarism. They were first used by the Egyptians and Greeks, during the infancy of the musical art among them; and they seem to have been invented and practised at all times by nations remote from each other, and between whom it is hardly possible that there ever could have been the least intercourse or communication.

Calmet; in his Dissertation on the Musical Instruments of the Hebrews, has given us an account of this discovery from Homer's Hymn to Mercury, in which he translates *πληκτρον*, plectrum, by the French word *archet*, "a bow," without citing a single authority for it from ancient authors. What kind of implement the *plectrum* was, may be discussed hereafter; but it is most certain that the *low* now in use was utterly unknown to the ancients.

Of all the divinities of Paganism, there was no one by whom the polite arts were said to have been, in so particular a manner, cherished and protected, as by Apollo; who had a variety of names given to him that were either derived from his principal attributes, or the chief places where he was worshipped. To the other perfections of this divinity, the poets have added beauty, grace, and the art of captivating the ear and the heart, no less by the sweetness of his eloquence than by the melodious sounds of his lyre. However, with all these accomplishments, he had not the talent of captivating the fair with whose charms he was enamoured; but we have nothing to do with his amours, nor with the other adventures related

of this god during his residence on earth, which are indeed too numerous, and too well known, to be inserted here: however, such as concern his musical contests, in which he was always victorious, seem too much connected with our subject to be wholly unnoticed.

To begin, therefore, with the dispute which he had with Pan, that was left to the arbitration of Midas. Pan, who thought he excelled in playing the flute, offered to prove that it was an instrument superior to the lyre of Apollo. The challenge was accepted; and Midas, who was appointed the umpire in this contest, deciding in favour of Pan, was rewarded by Apollo, according to the poets, with the ears of an ass, for his stupidity. This fiction, which seems founded upon history, must be explained. Midas, according to Pausanias and Strabo, was possessed of such great riches, and such an inordinate desire of increasing them by the most contemptible parsimony, that, according to the poets, he converted whatever he touched into gold. However, his talent for accumulation did not extend to the acquirement of taste and knowledge in the fine arts; and perhaps his dulness and inattention to these, provoked some musical poet to invent the fable of his decision in favour of Pan against Apollo. See MIDAS, vol. xv. p. 334.

Mariyas, another player on the flute, was still more unfortunate than either Pan or his admirer Midas. Hyagnis, a native of Celænæ, the capital of Phrygia, and contemporary with Erichthonius, who instituted the Panathenæan games at Athens, was the inventor of the flute, and of the Phrygian mode; as well as of the *nomos*, or airs, that were sung to the Mother of the Gods, to Bacchus, to Pan, and to some other divinities and heroes of that country. Plutarch and Nonnus both tell us that he was the father of Mariyas; Athenæus, from Aristoxenus, says that he invented the Phrygian mode; and Apuleius ascribes to him not only the invention of the single flute, but of the double. The double flute, however, is more generally given to his son Mariyas. Julius Pollux (lib. iv. cap. 10.) speaks of two kinds of single flute, the invention of which was attributed to the Libyans: the oblique flute, *πλαγιαυλος*, so called, perhaps, from being blown at the side, like the modern *fife*, or German flute; and a very shrill flute, made of laurel-wood, after the pith and bark were removed, that was used in breaking horses, *ἰπποφορβος*. The natives of every quarter of the globe seem to have invented their own flutes; and, if Hyagnis and his son Mariyas furnished the Asiatics with those instruments, Africa may have had her's from Lybia, or its neighbouring country, Egypt.

The connexion of Mariyas with Cybele, afterwards so celebrated as the mother of the gods, makes it necessary to speak of her, in the history of that unfortunate musician. The Phrygians, says Diodorus Siculus, affirm, that they had formerly a king named Meon, who was likewise sovereign of Lydia. This king took to wife a princess of the name of Dindyma, by whom he had a daughter. Enraged at the disappointment of not having a son, he exposed her upon mount Cybele. However the gods permitted her to be suckled by wild beasts; which being afterwards discovered by some shepherdesses in the neighbourhood, they stole her from her savage nurses, and upon carrying her home called her *Cybele*, from the name of the mountain where she had been found. This child surpassed, as she grew up, all her companions, not only in beauty, but wisdom and talents; for she invented a flute, composed of many pipes, and was the first of that country who introduced drums and cymbals into chorusses. The chief of her friends was Mariyas, a man commendable for his wisdom and temperance: he manifested great genius in the invention of a flute, which, by means of holes, like that of Minerva, expressed all the sounds of the several pipes of which the *syrix* was composed; and his attachment to Cybele must have been of a very pure and Platonic kind; for we are told that he preserved his chastity to the last hour of his life. Cybele, transported with love



for a young man named Atys, who had been put to death by her parents, became insane, and ran wildly up and down the country, beating the cymbals. Marfyas, taking pity of her misfortunes, and preserving his former friendship for her, followed her in all her rambles, till she arrived at Nyfa, the residence, at that time, of Bacchus, or Osiris, where they found Apollo, who had acquired great reputation by his manner of playing the lyre. For it is said, that, though Mercury invented this instrument in the manner already related, he afterwards gave it to Apollo, who was the first that played upon it with method; and, by singing to it, made it the constant companion of poetry. Diod. Sic. lib. iii. c. 10. But, according to Homer's account of this transaction, in his Hymn to Mercury, it was given by that god to Apollo as a peace-offering and indemnification for the oxen which he had stolen from him:

To Phœbus Maia's son presents the lyre,  
A gift intended to appease his ire;  
The god receives it gladly, and essays  
The novel instrument a thousand ways.  
With dext'rous skill the plectrum wields, and sings,  
With voice accordant to the trembling strings,  
Such strains as gods and men approv'd; from whence  
The sweet alliance sprung of sound and sense.

Be this as it may, Marfyas, having engaged in a musical dispute with Apollo, chose the people of Nyfa for judges. The particulars and the fatal event have been related at length under the word *MARSYAS*, vol. xiv. p. 423. Diodorus informs us, that Apollo, soon repenting of the cruelty with which he had treated Marfyas, broke the strings of the lyre, and by that means put a stop, for a time, to any further progress in the practice of that new instrument.

The next passage in this author being wholly applicable to the history of the ancient lyre, we shall transcribe it; "The Muses, says he, afterwards added to this instrument the string called *mesê*; Linus, that of *lichanos*; and Orpheus and Thamyras, those strings which are named *hypate* and *parhypate*." It has been already related, that the lyre invented by the Egyptian Mercury had but three strings; and, by putting these two circumstances together, we may perhaps acquire some knowledge of the extension of its scale, in the highest antiquity. *Mesê*, in the Greek music, is the fourth sound of the second tetrachord of the great system, and first tetrachord invented by the ancients, answering to our A on the fifth line in the bass. If this sound then was added to the former three, it proves two important points; first, that the most ancient tetrachord was that from E in the bass to A; and that the three original strings in the Mercurian and Apollonian lyre were tuned E, F, G, which the Greeks called *hypate meson*, *parhypate meson*, and *meson diatonos*. The addition therefore of *mesê* to these, completed the first and most ancient tetrachord, E, F, G, A. Captain Norden says, the sepulchral urn on the first pyramid near Memphis, though it rests intirely upon its base, sounds like a bell; and Dr. Shaw believes the sound emitted to be *E-la-mi*. Now, if it be true that the Greeks had their first musical knowledge from Egypt, we may suppose this sound to be the standard pitch and fundamental note of the Mercurian lyre, and first tetrachord E, F, G, A. The string *lichanos*, then, being added to these, and answering to our D, on the third line in the bass, extended the compass downwards, and gave the ancient lyre a regular series of five sounds, in the Dorian mode, the most ancient of all the Greek modes; and the two strings called *hypate* and *parhypate*, corresponding with our B and C in the bass, completed the heptachord, or seven sounds, B, C, D, E, F, G, A, a compass that received no addition till after the time of Pindar, who calls the instrument then in use the "seven-tongued lyre." But, though Pindar calls the lyre *seven-tongued*, yet we are told that Pythagoras, who lived before him,

added an eighth string to that instrument. This new string, however, might not be in general use in Pindar's time.

Plato tells us, that we are indebted to Marfyas and Olympus for wind-music; and to these two musicians is likewise attributed the invention of the Phrygian and Lydian measure. There were two great musicians in antiquity of the name of *Olympus*, and both celebrated performers on the flute. One of them flourished before the Trojan war; and the other was cotemporary with Midas, who died 697 years before Christ. The first was a scholar of Marfyas, and a Mysian; the second, according to Suidas, was a Phrygian, and author of several poems, which were by some attributed to the first Olympus. But the most important addition which the disciple of Marfyas made to the musical knowledge of his time, was the invention of the enharmonic genus; (see p. 347.) Plato and Aristotle, as well as Plutarch, celebrate his musical talents, and tell us that some of his airs were still subsisting in their time. Religion only can give permanence to music. The airs of Olympus used in the temple-worship during the time of Plutarch were not more ancient (says Dr. Burney) than the chants, or canto fermo, to some of the hymns of the Romish church; and the melodies now sung to many of the hymns and psalms of the Lutherans and Calvinists, are such as were applied to them at the time of the reformation.

Plato says the music of Olympus was, in a particular manner, adapted to affect and animate the hearers; Aristotle, that it swelled the soul with enthusiasm; and Plutarch, that it surpassed, in simplicity and effect, every other music then known. According to this biographer, he was author of the curule song, which caused Alexander to seize his arms, when it was performed to him by Antigides. To his musical abilities he joined those of poetry; and, according to Suidas, and Julius Pollux, he composed elegies, and other plaintive songs, which were sung to the sound of the flute; and the melodies of these poems were so much celebrated in antiquity for their pathetic and plaintive cast, that Aristophanes, in the beginning of his comedy called the Knights, where he introduces the two generals, Demosthenes and Nicias, travelling into valets, and complaining of their master, makes them say, "Let us weep and wail like two flutes, breathing some air of Olympus."

At p. 295. we have noticed the violent manner of blowing the flute in ancient times, and the danger attending such obstreperous exertions. Among the inventions of Marfyas is numbered the bandage made of leather thongs, occasionally used by the ancients in playing the flute, in order to keep the cheeks and lips firm, and to prevent the distortion of the countenance, so common in playing upon wind-instruments. This contrivance, which left only a small aperture between the lips, just sufficient to receive the mouth-piece of the flute, augmented likewise the force of the performer. This bandage was called *φορβεία*, or *περιστομιον*, the "headstall." It is mentioned in Plutarch's Symposiasts, in the Scholiast of Aristophanes; and elsewhere; and may be seen in some ancient sculpture which Bartholinus has had engraved in his treatise de Tibiis Veterum. See also our Plate XV.

As Apollo was the god of the fine arts, those who cultivated them were called his sons. Philammon of Delphos, being a great poet and musician, was reported to be the offspring of the god who presided over those arts. He is one of the first, after Apollo, upon fabulous record, as a vocal performer, who accompanied himself with the sound of the lyre: his son was the celebrated Thamyris. Tatian ranks Philammon among the writers who nourished before the time of Homer; and the scholiast of Apollonius Rhodius, from Pherecydes, affirms, that it was this musical poet, and not Orpheus, who accompanied the Argonauts in their expedition. If this circumstance could be depended upon, there would be no difficulty in fixing the time when he lived, as the chronolo-



gifts place this expedition in the century immediately preceding the Trojan war.

Plutarch, who was himself a priest of Apollo, impressed with the highest respect and veneration for him and for music, in his Dialogue upon that art, makes one of his interlocutors say, that an invention so useful and charming could never have been the work of man, but must have originated with some god; such as Apollo, the inventor of the flute and lyre, improperly attributed to Hyagnis, Marsyas, Olympus, and others; and the proofs he urges in support of this assertion, show, if not its truth, at least that it was the common and received opinion. All dances and sacrifices, says he, used in honour of Apollo, are performed to the sound of flutes; the statue of this god at Delos, erected in the time of Hercules, had in its right hand a bow, and on the left stood the three Graces, who were furnished with three kinds of instruments; the lyre, flute, and syrinx. The youth also, who carries the laurel of Tempe to Delphos, is accompanied by one playing on the flute; and the sacred presents formerly sent to Delos by the Hyperboreans, were conducted thither to the sound of lyres, flutes, and shepherds' pipes. He supports these facts by the testimonies of the poets Alceus, Alcman, and the poetess Corinna.

The ancients had numberless ingenious and fanciful ideas concerning the Muses; and some very whimsical and diverting: Fulgentius informs us that Apollo was painted with a cithara of *ten strings*, as a symbol of the union of the god with the nine muses, and to show that the human voice is composed of *ten parts*; of which the four first are the front *teeth*, placed one against the other, so useful for the appulse of the tongue, in forming sounds, that, without any one of them, a whistle would be produced instead of a voice; the fifth and sixth are the two *lips*; like cymbals, which, by being struck against each other, greatly facilitate speech; the seventh is the *tongue*, which serves as a plectrum to articulate sounds; the eighth is the *palate*, the concave of which forms a belly to the instrument; the ninth is the *throat*, which performs the part of a flute; and the tenth the *lungs*, which supply the place of bellows.

Next after the Muses, the names of Linus and Orpheus will naturally present themselves to the reader, as inventors or improvers of instruments. But so many fables have been devised concerning the first poets and musicians, that a doubt has been thrown even upon their existence. Chiron, Amphion, Orpheus, Linus, and Musæus, are spoken of by the poets and mythologists so hyperbolically, that the time when, and place where, they flourished, will appear to many as little worth a serious enquiry as the genealogy of Tom Thumb, or the chronology of a fairy tale. However, though ready to part with the miraculous powers of their music, we are unwilling that persons, whose talents have been so long celebrated, should be annihilated, and their actions cancelled from the records of past times.

Though the Egyptian Thebes is of much higher antiquity than the Grecian, yet this last is so ancient, and its history is so much involved in darkness and poetic fiction, that nothing can be depended upon concerning it, but that it is recorded to have been built by Cadmus, long before the Trojan war, or even the Argonautic expedition. Pausanias, indeed, gives a list of sixteen kings, who reigned at Thebes in Boeotia, but they are rather the heroes of tragedy than of real history. Among these is Amphion, of whom we have already spoken at p. 348. and, because it was thought necessary to show the analogy between the Græco-Theban and the Egypto-Theban lyre, the lyre of Amphion has been engraved on the same plate with the Egyptian instruments. See Plate XIV.

Chiron the Centaur (see CHIRON, vol. iv.) is said to have been the instructor of the Grecian Bacchus, who learned of this master the revels, orgies, Bacchanalia, and other ceremonies of his worship. According to Plutarch, it was likewise at the school of Chiron that Hercules

studied music, medicine, and justice; though Diodorus Siculus tells us that Linus was the music-master of this hero. These are points which it is now not easy to settle; nor are they of any other consequence to our enquiries, than serving as proofs, that ancient authors all agreed in thinking it natural and necessary for heroes to have been instructed in music. *Nec fides didicit, nec nature*, was, in antiquity, a reproach to every man above the rank of a plebeian. But among all the heroes who have been disciples of this Centaur, no one reflected so much honour upon him as Achilles, whose renown he in some measure shared, and to whose education he in a particular manner attended, being his grandfather by the mother's side. Apollodorus tells us that the study of music employed a considerable part of the time which he bestowed upon his young pupil, as an excitement to virtuous actions, and a bridle to the impetuosity of his temper. One of the best remains of antique painting now subsisting, is a picture upon this subject, dug out of Herculaneum, in which Chiron is teaching the young Achilles to play on the lyre. See Plate XV.

Every thing interesting concerning LINUS, the master or the scholar of Orpheus, has been given under that word, vol. xiv. p. 767.

Orpheus is one of the most ancient and venerable names among the poets and musicians of Greece. His reputation was established as early as the time of the Argonautic expedition, in which he was himself an adventurer; and is said by Apollodorus Rhodius, not only to have incited the Argonauts to row by the sound of his lyre, but to have vanquished and put to silence the Sirens, by the superiority of his strains. The majority of respectable ancient authors agree, that Orpheus was the son of Oeager, by birth a Thracian, the father or chief founder of the mythological and allegorical theology amongst the Greeks, and of all their most sacred religious rites and mysteries: he is commonly supposed to have lived before the Trojan war, that is, in the time of the Israelitish judges, or at least to have been senior both to Hesiod and Homer, and to have died a violent death, most affirming that he was torn in pieces by women. The family of Orpheus is traced by sir Isaac Newton for several generations: "Sesac, passing over the Hellespont, conquers Thrace, kills Lycurgus king of that country, and gives his kingdom, and one of his singing-women, to Oeagrus, the son of Tharops, and father of Orpheus; hence Orpheus is said to have had the muse Calliope for his mother." He is allowed by most ancient authors to have excelled in poetry and music, particularly the latter; and to have early cultivated the lyre, in preference to every other instrument; so that all those who came after him were contented to be his imitators; whereas "*he adopted no model*," says Plutarch; "for before his time no other music was known, except a few airs for the flute."

Profane authors look upon Orpheus as the inventor of that species of magic called evocation of the manes, or raising ghosts; and indeed the hymns which are attributed to him are mostly pieces of incantation, and real conjuration. Upon the death of his wife Eurydice, he retired to a place in Thesprotia, called Aornos, where an ancient oracle gave answers to such as evoked the dead. He there fancied he saw his dear Eurydice, and at his departure flattered himself that she followed him; but upon looking behind him, and not seeing her, he was so afflicted, that he soon died of grief. (Pausanias, lib. ix.)

There were persons among the ancients who made public profession of conjuring up ghosts, and there were temples where the ceremony of conjuration was to be performed. Pausanias speaks of that which was in Thesprotia, where Orpheus went to call up the ghost of his wife Eurydice. It is this very journey, and the motive which put him upon it, that made it believed he went down into hell. The poets have embellished this story, and given to the lyre of Orpheus, not only the power of silencing Cerberus, and of suspending the torments of



Tartarus, but also of charming the infernal deities themselves, whom he rendered so far propitious to his entreaties, as to restore to him Eurydice, upon condition that he would not look at her till he had quitted their dominions; a blessing which he soon forfeited, by a too eager and fatal affection.

Virgil bestows the first place in his Elysium upon the legislators, and "those who brought mankind from a state of nature into society;" *Magnanimi heroues, nati melioribus animis*. At the head of these is Orpheus, the most renowned of the European law-givers; but better known under the character of poet; for the first laws being written in measure, to allure men to learn them, and, when learnt, to retain them, the fable would have it, that by the force of harmony Orpheus softened the savage inhabitants of Thrace:

— *Thracicus longa cum veste sacerdos*  
*Obloquitur numeris septem discrimina vocum:*  
*Janque eadem digitis jam pectine pulsat cburno.* *Æn.* vi. 645.

The Thracian bard, surrounded by the rest,  
 There stands conspicuous in his flowing vest;  
 His sly fingers, and harmonious quill,  
 Strike seven distinguish'd notes.

*Dryden.*

The seven strings given by the poet in this passage to the lyre of Orpheus, is a circumstance somewhat historical. The first Mercurian lyre had, at most, but four strings. Others were afterwards added to it by the second Mercury, or by Amphion; but, according to several traditions preserved by Greek historians, it was Orpheus who completed the second tetrachord, which extended the scale to a heptachord, or seven sounds, implied by the *septem discrimina vocum*; for the assertion of many writers, that Orpheus added two new strings to the lyre, which before had seven, clashes with the claim of Pythagoras to the invention of the octachord, or addition of an eighth sound to the heptachord, which made the scale consist of two disjunct, instead of two conjunct, tetrachords, and of which almost all antiquity allows him to have been the inventor. Nor is it easy to suppose, that the lyre should have been represented in ancient sculpture with four or five strings only, if it had had nine so early as the time of Orpheus, who flourished long before sculpture was known in Greece. What is here said concerning the progressive improvements of instrumental music, must be wholly confined to Greece; for proofs have already been given of the Egyptians having been in possession of more perfect instruments than those just mentioned, long before the time when Orpheus is supposed to have flourished.

We now come to the Trojan war, the second important epoch in Grecian history. Antiquity has paid such respect to the personages mentioned in the poems of Homer, as never to have doubted of the real existence of any one of them. The poets and musicians, therefore, who have been celebrated by this great fire of song are ranked among the bards of Greece who flourished about the time of the Trojan war, and of whose works, though nothing entire remains, yet the names, and even fragments of some of them, are to be found in several ancient authors posterior to Homer. Homer flourished 900 or 1000 years B. C.

Music we find mentioned with a degree of rapture in more than fifty places of the *Iliad* and *Odyssey*. However, it is in such close union with poetry, that it is difficult to discriminate to which the poet's praises belong. The lyre indeed is constantly in the hands of the bard, but merely as an instrument of accompaniment to the voice. So that music and the lyre were frequently only vehicles through which Homer celebrated the power of poetical numbers. Singing there is without instruments; but of instrumental music without vocal, there does not appear the least trace in the writings of Homer. Even dancing was accompanied by the voice, according to the following passage:

Then to the dance they form the vocal strain,  
 Till Hesperus leads forth the starry train.

*Od.* v.

It seems as if nothing would convey to the reader a more just and clear idea of the state of music in the time of the Trojan war, or at least of Homer, than a list of the instruments mentioned in the original; these are the *lyre*, the *flute*, and the *syrix*. The lyre has been called by translators, lute, harp, cithara, and testudo, just as the convenience of verification required; and, if these and the lyre were not in ancient times one and the same instrument, they were certainly all of the same kind. The flute and syrix have already been said to be of Egyptian origin, and of great antiquity. These instruments are specified by Homer in a passage where they do not appear in Pope's version: *Αὐγὼν συρίων τ' ἐνοπλην, ὁμαδὸν τ' ἀνθρώπων.* *Il.* xx.

With respect to *military music*, the trumpet is mentioned by Homer in a simile; yet it is agreed by all the critics, that it was unknown to the Greeks during the Trojan war, though it was in common use in the time of the poet. According to archbishop Potter, before the invention of trumpets, the first signals of battle in primitive wars were lighted torches; to these succeeded shells of fishes, which were sounded like trumpets. "Nothing was more useful, says Plutarch, than music to stimulate mankind to virtuous actions, particularly in exciting that degree of courage, which is necessary to brave the dangers of war. To this end some have used the flute, and others the lyre. The Lacedæmonians, in approaching the enemy, played upon the *flute* the air or melody that was set to the song or hymn addressed to Castor; and the Cretans played their military marches for many ages on the *lyre*." The Thebans and Lacedæmonians had a flute upon their ensigns; the Cretans, a lyre; and many ancient nations and cities have impressed the lyre upon their coins, as their particular symbol. The city of Rhegium, for instance, had a woman's head on one side, and on the reverse a lyre. In a medal inscribed *Caleno*, the Minotaur is seen, with the addition of the lyre. The Thebians had one of the Muses and a lyre; the Lapithæ, a Diana, and on the reverse a lyre; the Isle of Chios, Homer on one side, and on the other a sphinx, with a lyre in its paw. The inhabitants of the Isle of Tenedos had on one side of their coins a head with two faces, and on the reverse an axe, with a bunch of grapes, the symbol of Bacchus, near it on one side; and a lyre, the symbol of Apollo, on the other. The lyre with thirteen strings is likewise to be seen on two Roman coins in Montfaucon.

We find, during the siege of Troy, that heralds gave the signals of battle, *viva voce*. Nestor says to Agamemnon before an engagement;

Now bid thy heralds sound the loud alarms,  
 And call the squadrons sheath'd in brazen arms. *Iliad* ii.

The vociferous Stentor is celebrated by Homer as the most illustrious throat-performer, or herald, of antiquity: Stentor the strong, endued with brazen lungs, Whose throat surpass'd the noise of fifty tongues. *Iliad* iv.

Pope observes on this passage, that "there was a necessity for cryers whose voices were stronger than ordinary, in those ancient times, before the use of trumpets was known in their armies. And that they were in esteem afterwards, may be seen from Herodotus, where he takes notice that Darius had in his train an Egyptian whose voice was louder and stronger than that of any other man of his age."

Fabricius has given a list of more than seventy poets who were supposed to have flourished before the time of Homer. Of twenty among these, fragments of their writings are still to be found dispersed through Greek literature; and near thirty of them have been celebrated by antiquity as improvers of the art of music, and of musical instruments. We might here insert the names of all these ante-Homerian musicians, and relate what has been recorded concerning them in ancient authors; but this would be encroaching on that place which must be reserved



reserved for persons and transactions of more modern times, and of greater certitude. Indeed several of them have been mentioned already; and, as the rest will naturally appear in their places in the alphabet, we shall here notice only Thamyris and Demodocus.

Thamyris is called by Homer *ῥιπαῖος*, "one who plays on the cithara." Plutarch, in his Dialogue on Music, tells us, that he was born in Thrace, the country of Orpheus, and had the sweetest and most sonorous voice of any bard of his time. He was the son of Philammon, of whom mention has already been made. Homer, in his Catalogue of Ships, where he speaks of the cities under the dominion of Nestor, mentions Dorion as the place where Thamyris contended with the Muses, whom he had the arrogance to challenge to a trial of skill in poetry and music. The conditions and consequences of this contention are fully described by the poet:

And Dorion, fam'd for Thamyris' disgrace,  
Superior once of all the tuneful race,  
Till, vain of mortals' empty praise, he strove  
To match the seed of cloud-compelling Jove:  
Too daring bard! whose unsuccessful pride  
Th' immortal Muses in their art defy'd;  
Th' avenging Muses of the light of day  
Depriv'd his eyes, and snatch'd his voice away:  
No more his heav'nly voice was heard to sing,  
His hand no more awak'd the silver string. *Iliad* ii.

Plutarch informs us also, that the painter Polygnotus, in his celebrated picture of Ulysses' descent into hell, which was preserved in the temple of Delphos, had represented the wretched Thamyris with his eyes put out, his hair and beard long and dishevelled, and his lyre, broken and unstrung, lying at his feet. It is certain too, according to Pausanias, that this bard was not only the subject of painting and poetry, but of sculpture; for he tells us, that, among the statues with which Mount Helicon was decorated, he saw one of Thamyris, represented blind, and holding a broken lyre in his hand. According to Diodorus Siculus, he learnt music at the school of Linus. Pliny tells us that he was the first who performed on an instrument without the voice, i. e. the first *solo-player*; and, if we may credit Suidas, he was generally regarded as the eighth among the epic poets who preceded Homer. As to his works, which are wholly lost, antiquity has preserved the names of several. Tzetzes mentions a Cosmogony, or creation of the world, in five hundred verses, and Suidas a Theogony in three thousand; perhaps both these writers speak of one and the same poem. He was said chiefly to have excelled in the composition of hymns; on which account Plato compares him with Orpheus; and, as he makes the soul of this bard, after death, pass into that of a swan, he fixes the residence of that of Thamyris in a nightingale. We only know his poem upon the War of the Titans by what Plutarch tells us of it from Heraclides of Pontus. Clemens Alexandrinus attributes to him the invention of the Dorian mode or melody, which, if it could be proved, would be of more importance to our present enquiries than the ascertaining his poetical works. But this mode, it has been suggested already, was so ancient, that it may well be imagined to have been brought out of Egypt by the first invaders of Greece, who settled in that part of it which was called Doria.

In speaking of Demodocus, Homer has taken occasion to exalt the character of poet and bard to the summit of human glory; and it has been generally thought, says Pope, that Homer represented himself in the person of Demodocus. It is remarkable, at least, that he takes very extraordinary care of his brother-poet, and introduces him as a person of great distinction. He calls him (*Odyss. viii.*) "the hero Demodocus;" he places him on a throne studded with silver, and gives him an herald for his attendant. Nor is he less careful to provide for his entertainment: he has a particular table, and a capacious

bowl set before him to drink from "as often as he had a mind," as the original expresses it. Some merry wits have turned the last circumstance into raillery, and insinuate that Homer in this place, as well as in the former, means himself in the person of Demodocus; an intimation that he would not be displeased to meet with the like hospitality. Homer several times in this book ascribes the song of Demodocus to immediate inspiration; but to cite all the praise bestowed upon Demodocus, would be to transcribe the whole eighth book of the *Odysses*. It may be worth observing, that he sung and played extempore: "The bard, advancing, meditates the lay." And again:

O more than man! thy soul the Muse inspires,  
And Phœbus animates with all his fires:  
For who, by Phœbus uninform'd, could know  
The woe of Greece, and sing so well the woe?  
Just to the tale, as present at the fray,  
Or taught the labours of the dreadful day;  
The song recalls past horrors to my eyes,  
And bids proud Ilion from her ashes rise.

Pope.

Eustathius observes, that Homer in this passage very artfully represents himself in the person of Demodocus: it is *he* who wrote the war of Troy with as much faithfulness as if he had been present at it; it is *he* who had little or no assistance from former relations of that story, and consequently receives it from Apollo and the Muses. This is moreover a secret insinuation, that we are not to look upon the *Iliad* as all fiction and fable, but in general as a real history, related with as much certainty as if the poet had been present at those memorable actions.

Eustathius adds, that poets were ranked in the class of philosophers; and the ancients made use of them as preceptors in music and morality. But he tells us likewise, that these *αοιδοί* were said by some writers to have had their names from this circumstance, *ὡς αἰδοῖα μὴ ἐχούτες*; exactly resembling the Italian singers. "If this be true, (says Pope,) it makes a great difference between the ancient and modern poets, and is the only advantage that I know of which we have over them." This idea sufficiently qualifies a bard for the office of guardian to the chastity of a frail princess, and puts him upon a footing with the chamberlains, the *εὐεργετοί* of ancient Persia, and other eastern countries. And accordingly, Demodocus is supposed by the same critic, and by others, to have been the bard, already mentioned at p. 296. with whom Agamemnon left Clytemnestra in charge. He was blind, as well as Tiresias, Thamyris, and Homer. The instrument he played upon is called in the *Odysses* *phorminx*. Plutarch says, that he wrote the Destruction of Troy in verse, and the Nuptials of Vulcan and Venus. And Ulysses is said, by Ptolemy Hephestion, to have gained the prize at the Tyrrhene games, by singing the verses of Demodocus.

Thaletas of Crete is the next poet-musician upon record, after Hesiod and Homer. This bard has been confounded by some writers with Thales, the celebrated Milesian philosopher; but, according to Plutarch, he was cotemporary with Lycurgus, the Spartan legislator, and lived about three hundred years after the Trojan war. Plutarch also informs us, that, though Thaletas was only styled a lyric poet and musician, he was likewise a great philosopher and politician; inasmuch that Lycurgus brought him from Crete, when he returned from his travels, to Sparta, in order to have assistance from him, in establishing his new form of government. His Odes, continues Plutarch, were so many exhortations to obedience and concord, which he enforced by the sweetness of his voice and melody. Plato, likewise, describes his captivating manner of singing; and Plutarch, in his Dialogue on Music, ascribes to Thaletas many musical compositions and inventions: such as *paens*, and new measures in verse, as well as rhythms in music, which he had acquired from the flute-playing of Olympus, whom he at first had imitated.



tated. Porphyry, in his *Life of Pythagoras*, says, that this philosopher used to amuse himself with singing the old *Pæans* of *Thaletas*; and *Athenæus* likewise tells us, that the Spartans long continued to sing his airs; and, according to the scholiast on *Pindar*, this poet-musician was the first who composed the *hyporchemes*, for the armed or military dance. The Greeks called *ὑπορχήματα*, a kind of poetry composed, not only to be sung to the sound of flutes and cithara, but to be danced at the same time. The Italian term *ballata*, the French *ballade*, and the English word *ballad*, now *ballet* in French and English, had formerly the same import; implying, severally, a song, the melody of which was to regulate the time of a dance. And the different measures of poetry being called *feet*, both in ancient and modern languages, suggests an idea that dancing, if not anterior to poetry and music, had a very early and intimate connection with them both. The poet *Simonides* defined Poetry an *eloquent dance*; and Dancing, a *silent poetry*.

There was another poet and musician of the name of *Thaletas*, who was likewise a Cretan, that flourished much later than the cotemporary and friend of *Lycurgus*. Sir *Isaac Newton* has named him among the early victors at the Pythic games; and Dr. *Blair* places him 673 years B.C. This is the *Thaletas* whom *Plutarch* makes cotemporary with *Solon*; and of whom it is related, that he delivered the Lacedæmonians from the pestilence by the sweetness of his lyre.

*Archilochus* has been mentioned as the inventor of *dramatic melody*, or the melody used in declamation; which, in modern language, might be termed "Recitative to strict measure," such as the voice-part observes in many modern pieces of accompanied recitative. For his family, the time when he flourished, and the manner of his death, see vol. ii. p. 60. Dr. *Burney* says, "There is a great resemblance between the incidents of his life and those of the poet *Rousseau*: both were equally unfortunate in love, friendship, and death; both were at war with the world, and the world with them; nor was either admired till he ceased to be feared. A peevish, satirical, and irascible disposition soured the public, and embittered their own existence. A general satirist, like *Cocles* on the bridge, stands alone, against a whole army of foes." *Archilochus* is generally ranked among the first victors at the Pythic games; and we learn from *Pindar*, that his muse was not always a termagant: for though no mortal escaped her rage, yet she was at times sufficiently tranquil and pious to dictate hymns in praise of the gods and heroes. One, in particular, written in honour of *Hercules*, acquired him the acclamations of all Greece; for he sung it in full assembly at the Olympic games, and had the satisfaction of receiving from the judges the crown of victory, consecrated to real merit. This hymn, or ode, was afterwards sung in honour of every victor at Olympia who had no poet to celebrate his particular exploits.

The Lacedæmonians, though a military people, of austere manners, appear at all times, notwithstanding their inhospitable law against the admission of strangers, to have invited eminent musicians into their country, and to have encouraged music; not only in order to regulate their steps and animate the courage of their troops, but to grace their festivals, and fill their hours of leisure in private life. *Tyrtæus*, an Athenian general, and musician, is celebrated by all antiquity for the composition of military songs and airs, as well as the performance of them. He was called to the assistance of the Lacedæmonians, in the second war with the Messenians, about 685 B.C. and a memorable victory which they obtained over that people is attributed, by the ancient scholiasts upon *Horace*, to the animating sound of a new military flute, or clarion, invented and played upon by *Tyrtæus*. *Plutarch* tells us that they gave him the freedom of their city; and that his military airs were constantly sung and played in the Spartan army, to the last hour of the republic. And *Lycurgus* the orator, in his oration against *Leocrates*,

says, "The Spartans made a law, that, whenever they were in arms, and going out upon any military expedition, they should all be first summoned to the king's tent, to hear the songs of *Tyrtæus*;" thinking it the best means of sending them forth with a disposition to die with pleasure for their country. He was likewise the author of a celebrated song and dance performed at festivals by three choirs; the first of which was composed of old men, the second of such as were arrived at maturity, and the third of boys. The first chorus began by this verse:

In youth our souls with martial ardor glow'd.

The 2d. We present glory seek—point out the road.

The 3d. Though now with children we can only clasp,  
We hope our future deeds will your's surpass.

The trumpet is first mentioned in Greece at the time of the Olympic games. We have the authority of *Pausanias* (lib. vi.) for the horse-race being accompanied by the trumpet; and many ancient writers tell us that the chariot-race was likewise accompanied by the flute. In the 96th Olympiad, 396 B.C. a prize was instituted at the Olympic games for the best performer on the trumpet. The first performer upon this instrument, who gained the prize at the Olympic games, was *Timæus* of Elis. His countryman, *Crates*, obtained one there the same year, on the cornet, or horn. *Archias* of Hybla, in Sicily, was victor on the trumpet at three several Olympiads, after this period. These premiums seem not to have been temporary, but to have been continued long after their first establishment; for *Athenæus* informs us, that the famous trumpeter, *Herodorus* of Megara, was victor at the Olympic games ten several times; *Julius Pollux* says fifteen. But these writers must mean that he obtained so many prizes at the different games of Greece; as *Athenæus* informs us that he was victor in the whole circle of sacred games, having been crowned at the Olympian, Pythian, Nemean, and Isthmian, by turns. As *Herodorus* is allowed to have been cotemporary with *Demetrius Poliorcetes*, he may be placed about the 120th Olymp. 300 B.C. According to the authors already cited, he was as remarkable for his gigantic figure and enormous appetite as for the strength of his lungs, which were so powerful in blowing the trumpet, that he could not be heard with safety, unless at a great distance. But, upon these occasions, the danger was not always confined to the hearers; the performers themselves, sometimes, seem to have exulted, and to have been very thankful, that they found themselves alive and well when their solos were ended. An epigram of *Archias*, the Hyblæan trumpeter, mentioned above, is preserved in *Julius Pollux*, in which he dedicates a statue to *Apollo*, in gratitude for his having been enabled to proclaim the Olympic games with his trumpet three times, without bursting his cheeks or a blood-vessel, though he sounded with all his force, and without a capistrum. This will not be wondered at, after what has been related (p. 295.) of the dangers of the flute.

The Olympic games, according to *St. Chrysofom*, continued to be celebrated with splendour till the end of the fourth century.

The Pythic games were still more ancient. For the occasion of their institution, see *APOLLO*, vol. i. p. 804. They were celebrated at first once in eight or nine years; but in process of time were repeated every four years. And if, as *Ovid* informs us, they owe their institution to *Amphictyon*, the son of *Deucalion*, soon after the deluge which bears the name of his father, they were the most ancient of all the four great games of Greece: for *Pausanias* tells us that the Olympic games were first celebrated by *Clymenus*, a descendant of *Hercules*, fifty years after the deluge of *Deucalion*. However, the same writer, who, in his travels through Greece, was particularly solicitous to inform himself of every circumstance relative to these institutions, tells us, that *Diomedes*, the son of *Tydeus*, having escaped a dangerous tempest in returning  
from



from Troy, dedicated a temple to Apollo, and founded the Pythian games in his honour. After being discontinued for some time, they were renewed by the brave Eurylochus of Thessaly, whose valour and exploits acquired him the name of the *new Achilles*. This renewal of the Pythic games happened in the third year of the forty-eighth Olympiad, 586 before Christ; after which time they served as an æra to the inhabitants of Delphos, and the neighbourhood.

"The Pythic games (says Pausanias, lib. x. c. 7.) consisted, in ancient times, of only poetical and musical contests; and the prize was given to him who had written and sung the best hymn in honour of Apollo. At their first celebration, Chrysothemis of Crete, the son of Carmanor, who purified Apollo after he had killed the Python, was victor. After him, Philammon, the son of Chrysothemis, won the prize; and the next who was crowned, was Thamyris, the son of Philammon. Eleutheros is recorded to have gained the prize there, by the power and sweetness of his voice; though the hymn which he sung was the composition of another. It is said, likewise, that Hesiod was refused admission among the candidates, on account of his not having been able to accompany himself upon the lyre; and that Homer, though he went to Delphos to consult the oracle, yet, on account of his blindness and infirmities, he made but little use of his talent of singing and playing upon the lyre at the same time." Hence it appears, that, though musical contests were, perhaps, not ranked among the regular and established exercises of the Olympic games, yet all antiquity agrees, that *no others* were admitted into the *Pythic*, during the first ages of their celebration.

Pausanias, in his enumeration of the musical contests that were added to the ancient Pythic games, at the close of the Crissæan war, tells us, that the Amphictyons proposed prizes, not only for those musicians who sung best to the accompaniment of the cithara, the only combat at the first institution of these games, but others, both to such as should sing best to the accompaniment of the flute, and to those who, with the greatest precision and taste, played on that instrument alone, *without singing*. Here began the separation of music and poetry. All the trials of skill, all the performances at banquets, festivals, and sacrifices, have hitherto been confined to *vocal music*, accompanied by instruments indeed, but where poetry had an important concern; at least, no instrumental music, without vocal, since the contest between Apollo and Marsyas, is mentioned in ancient authors, before this time, except that of the trumpet mentioned in the preceding page, the lyre and flute having, in public exhibitions, been mere attendants on the voice, and on poetry.

This was soon after the time when Sacadas is recorded to have played his Pythic air, on the flute, at Delphos, which reconciled Apollo (or his priest) to that instrument; who, till then, was said to have had it in abhorrence ever since the contest with Marsyas. This musician was not crowned the first time he played at the Pythic games, but in two subsequent Pythiads he obtained the prize; which furnishes a proof that instrumental music, separated from vocal, began now to be successfully cultivated among the Greeks.

After this, the same games and combats were established at Delphos as at Olympia. The Amphictyons retrenched the flute-accompaniment, on account of that instrument being too plaintive, and fit only for lamentations and elegies, to which it was chiefly appropriated. A proof of this, says Pausanias, is given in the offering which Echembrotus made to Hercules of a bronze tripod, with this inscription: "Echembrotus the Arcadian dedicated this tripod to Hercules, after obtaining the prize at the games of the Amphictyons, where he accompanied the elegies that were sung in the assembly of the Greeks, with the flute."

At the 8th Pythiad, 559 years B.C. a crown was given

to *players upon stringed instruments, without singing*, which was won by Agelaus of Tegea.

Strabo, speaking of the different kinds of contests established by the Amphictyons, at the first Pythic games after the Crissæans were subdued, mentions a particular species of composition, which was sung to the hymn in praise of Apollo, and accompanied by instruments. It was called the *Pythian nome*: and was a kind of long cantata, consisting of five parts, or movements, all alluding to the victory obtained by the god over the serpent Python. The first part was called the *prelude*, or preparation for the fight; the second, the *onset*, or beginning of the combat; the third, the *heat of the battle*; the fourth, the *song of victory*, or the insults of Apollo over the serpent Python, composed of Iambics and Dactyls; and the fifth, the *hissing of the dying monster*. This air, Pausanias tells us, was composed, and first played at Delphos, by Sacadas, who, according to Plutarch, was an excellent poet, as well as musician, and author of lyric poems, of elegies, and of a composition consisting of three strophes or couplets, performed successively in the three modes chiefly used in his time, the Dorian, Phrygian, and Lydian; and this air was called *trimeles*, on account of its changes of modulation. Both Plutarch and Pausanias mention his having been celebrated by Pindar; but, as we are not in possession of all that poet's works, this honourable testimony cannot be found at present. The reputation of Sacadas must doubtless have been very great: for Plutarch says, that his name was inserted in the Pythic list of good poets; and Pausanias, that he found his statue, with a flute in his hand, on mount Helicon, and his tomb at Argos. We are the more particular in speaking of this personage, as he is the first upon record who detached music from poetry, and who, though a good poet himself, engaged the public attention in favour of *mere instrumental music*; a *schism* (says Dr. Burney) that has been as severely censured as any one in the church. The censurers, however, have forgotten that such schisms in the arts are as much to be desired as those of religion are to be avoided; since it is by such separations only, that the different arts, and different branches of the same art, becoming the objects of separate and exclusive cultivation, are brought to their last refinement and perfection.

After Sacadas had pointed out the road to fame by means of instrumental music, it was so successfully pursued by Pythocritus, of Sicyon, whose statue was erected at Olympia, that he gained the prize of Delphos, as a solo-player on the flute, six different times.

Sir Isaac Newton observes, that by the encouragement of the Pythic games, after their regular celebration was established, several eminent musicians and poets flourished in Greece; and gives a catalogue of more than twenty, concerning several of whom particular mention has been made already, in the course of this article.

Alcman, the first of these ancient bards, was a native of Sardis, and flourished about 670 years B.C. Heraclides of Pontus assures us, that he was a slave in his youth at Sparta; but that, by his good qualities and genius, he acquired his freedom, and a considerable reputation in lyric poetry. He was consequently an excellent performer on the cithara; and, if he was not a flute-player, he at least sung verses to that instrument. Clemens Alexandrinus makes him author of music for choral dances; and, according to Archytas Harmoniacus, quoted by Athenæus, Alcman was one of the first and most eminent composers of songs upon love and gallantry. If we may credit Suidas, he was the first who excluded hexameters from verses that were to be sung to the lyre, which afterwards obtained the title of *lyric poems*.

Alcæus was born at Mitylene, the capital of Lesbos. He flourished, according to the Chronicle of Eusebius, in the 44th Olympiad, that is to say, about 604 years B.C. and was consequently the countryman and cotemporary

of Sappho, with whom, it is pretended, he was violently enamoured. He is generally allowed to have been one of the greatest lyric poets in antiquity; and, as he lived before the separation of the twin-sisters, poetry and music, this character must imply that he was the friend and favourite of both. His numerous poems, on different subjects, were written in the *Æolian* dialect, and chiefly in a measure of his own invention, which has ever since been distinguished by the name of *Alcæic*. Of these only a few fragments remain. He composed hymns, odes, and epigrams, upon very different subjects; sometimes railing at tyrants, and singing their downfall; sometimes his own military exploits; his misfortunes; his sufferings at sea; his exile; and all, according to Quintilian, in a manner so chaste, concise, magnificent, and sententious, and so nearly approaching to that of Homer, that he well merited the *golden plectrum* bestowed upon him by Horace. Sometimes he descended to less serious subjects, singing cheerfully the praises of Bacchus, Venus, Cupid, and the Muses.

The adventures of Sappho, and the remains of her poetical works, will be the subject of a future article. A musical invention has, however, been attributed to her, of which it seems necessary to take some notice in this place. This celebrated poetess is said by Plutarch, from Aristoxenus, to have invented the *Mixolydian mode*. Dr. Burney is of opinion, that the *Lydian mode* was the highest of the five original modes, having its lowest sound upon F\*, the fourth line in the bass. The *Mixolydian* was higher by half a tone; the *Hypermixolydian* a minor third higher, and the *Hyperlydian* a fourth higher. Plato, desirous of simplifying music, and of keeping the scale within moderate bounds, complains, in the third book of his Republic, of the licentiousness of these acute modes. Now, if the only difference in the modes was the place they occupied in the great system, with respect to gravity or acuteness, the invention, as it was called, of this mode, may have been suggested to Sappho, by her having a voice of a higher pitch than her predecessors; she was, perhaps, the *Agujari* of her time, and could transcend the limits of all former scales with equal facility. But, though nature may have enabled this exquisite poetess to sing her verses in a higher key than any one had done before, yet, as it is allowed but to few to surpass the common boundaries of human faculties and talents, it is probable that her successors, by attempting, with inferior organs, to ascend those heights, had given offence to Plato, and determined him to prohibit the use of this mode in his republic, as indecorous, and too effeminate even for women. If, however, it be true, that the characteristic of the modes depended partly, if not principally, upon the *rhythm* or *cadence*, it seems not an improbable conjecture, that besides the difference of pitch, the novelty of Sappho's mode might, in a great measure, consist in her first applying to melody the measure called *Sapphic*, from her invention of it. This mode, as Plutarch informs us, was adopted by the tragic poets, as proper for pathos, and lamentation; a character for which it is not easy to account, without supposing other differences besides those of mere *rhythm*, or *pitch*; though both Plato and Plutarch evidently ascribe this character, in part, at least, to the circumstance of acuteness.

Simonides was born in the 55th Olympiad, 538 years B.C. and died in his ninetieth year. He was a native of Ceos, one of the Cyclades, in the neighbourhood of Attica; and the preceptor of Pindar. Both Plato and Cicero not only give him the character of a good poet and musician, but speak of him as a person of great virtue and wisdom. Such longevity gave him an opportunity of knowing a great number of the first characters in antiquity, with whom he was in some measure connected. It appears in Fabricius, from ancient authority, that he was cotemporary and in friendship with Pittacus of Mitylene; Hipparchus, tyrant of Athens; Pausanias, king of Sparta; Hiero, tyrant of Syracuse; with Themistocles;

and with Alcuaides, king of Theffaly. He obtained the prize in poetry at the public games when he was four-score years of age. According to Suidas, he added four letters to the Greek alphabet; and Pliny assigns to him the eighth string of the lyre; but these claims are disputed by the learned. Among the numerous poetical productions, of which, according to Fabricius, antiquity has made him the author, are many songs of victory and triumph, for athletic conquerors at the public games. He is likewise said to have gained there, himself, the prize in elegiac poetry, when Æschylus was his competitor. His poetry was so tender and plaintive, that he acquired the cognomen of "*Melicertes*, sweet as honey;" and the tearful eye of his muse was proverbial.

Bacchylides was the nephew of Simonides, and the contemporary and rival of Pindar. Both sung the victories of Hiero at the public games. Besides odes to athletic victors, he was author of Love Verses; Profodies; Dithyrambs; Hymns; Pæans; Hyporchemes; and Parthenia, or songs to be sung by a chorus of virgins at festivals. The chronology of Eusebius places the birth of Bacchylides in the 82d Olympiad, about 450 B.C.

Pindar was born at Thebes in Bæotia, about 520 years B.C. He received his first musical instructions from his father, who was a flute-player by profession; after which, according to Suidas, he was placed under Myrtis, a lady of distinguished abilities in lyric poetry. It was during this period, that he became acquainted with the poetess Corinna, who was likewise a student under Myrtis. Plutarch tells us, that Pindar profited from the lessons which Corinna, more advanced in her studies, gave him at this school. Pindar, however, soon quitted the leading-strings of these ladies, his poetical nurses, and became the disciple of Simonides, now arrived at extreme old age; after which he soon surpassed all his masters, and acquired great reputation throughout Greece; but, like a true prophet, was less honoured in his own country than elsewhere; for at Thebes he was frequently pronounced to be vanquished, in the musical and poetical contests, by candidates of inferior merit. The custom of having these public trials of skill, in all the great cities of Greece, was now so prevalent, that but little fame was to be acquired by a musician or poet, any other way than by entering the lists; and we find that both Myrtis and Corinna publicly disputed the prize with him at Thebes. A public contention with Myrtis, his *alma mater*, and with his *sister-student* Corinna, seems unnatural; but there are few ties which can keep ambition within due bounds. He obtained a victory over Myrtis; but was vanquished five different times by Corinna. The judges, upon occasions like these, have been frequently accused of partiality or ignorance, not only by the vanquished, but by posterity; and, if the merit of Pindar was pronounced inferior to that of Corinna five several times, it was, says Pausanias, because the judges were more sensible to the charms of beauty than to those of music and poetry. Was it not strange, said the Scythian Anacharsis, that the Grecian artists were never judged by artists, their peers?

Thebes seems to have been the purgatory of our young bard; when he quitted that city, as his judgment was matured, he avoided most of the errors for which he had been chastised, and suddenly became the wonder and delight of all Greece. Every hero, prince, and potentate, desirous of lasting fame, courted the muse of Pindar. He seems frequently to have been present at the four great festivals of the Olympian, Pythian, Nemean, and Isthmian, games, as may be inferred from several circumstances and expressions in the odes which he composed for the victors in them all. Those at Olympia, who were ambitious of having their achievements celebrated by Pindar, applied to him for an ode, which was first sung in the *Prytæneum*, or town-hall of Olympia, where there was a banquetting-room set apart for the entertainment of the conquerors. Here the ode was rehearsed by a chorus, accompanied by instruments. It was afterwards performed in the same manner



manner: at the triumphal entry of the victor into his own country, in processions, or at the sacrifices that were made with great pomp and solemnity on the occasion.

Pausanias says, that the character of poet was truly consecrated, in the person of Pindar, by the god of verse himself, who was pleased, by an express oracle, to order the inhabitants of Delphos to set apart, for Pindar, one half of the first-fruit offerings brought by the religious to his shrine, and to allow him a conspicuous place in his temple; where, in an iron chair, he used to sit and sing his hymns in honour of that god. This chair was remaining in the time of Pausanias, several centuries after; and shown to him as a relic, not unworthy of the sanctity and magnificence of that place. Such a *finger* as Pindar would be heard with the same rapture in a Pagan temple, as a Farinelli in an Italian church; and, as both would draw together crowded congregations, both would be equally caressed and encouraged by the priests.

But, though Pindar's muse was pensioned at Delphos, and well paid by princes and potentates elsewhere, she seems, however, sometimes to have sung the spontaneous strains of pure friendship. Of this kind were, probably, the verses bestowed upon the musician Midas, of Agrigentum, in Sicily, who had twice obtained the palm of victory, by his performance on the flute, at the Pythic games. It is in the 12th Pythic Ode, that Pindar celebrates the victory of Midas over all Greece, "upon that instrument which Minerva herself had invented." This Midas is a very different personage from his long-eared majesty of Phrygia, whose decision in favour of Pan, had given such offence to Apollo; as is manifested, indeed, from his having been cotemporary with Pindar. The most extraordinary part of this musician's performance, that can be gathered from the scholiast upon Pindar, was his finishing the solo, without a reed, or mouth-piece, which broke accidentally while he was playing. The legendary account given by the poet in this ode, of the occasion upon which the flute was invented by Minerva, is diverting: "It was, says he, to imitate the howling of the Gorgons, and the hissing of their snakes, which the goddess had heard when the head of Medusa (one of these three *Anti-Graces*) was cut off by Perseus."

Plutarch, who on many occasions seems to have consulted the registers of the sacred games, tells us, in his *Life of Lyfander* the Spartan general, that the musician Aristonous, who had six times obtained the prize for singing to the *cithara* in the Pythic games, flattered Lyfander so far as to tell him, that, if ever he gained another victory, he would be publicly proclaimed his disciple and servant. This was after the Spartan had taken the city of Athens, beaten down the walls, and burned all the ships in the harbour, to the sound of flutes; an event which happened in the 94th Olympiad, 404 years B. C.

Indisputable testimonies are to be found in ancient authors, of the continuation of musical contests at these games, till their final abolition after the establishment of the Christian religion. We shall only mention the victory which Pausanias informs us, was gained there by Pylades, upon the *cithara*, about the 94th Pythiad, 211 years before Christ; the *Pythic laurel*, which both Suetonius and Dio Cassius inform us, Nero, as a *citharedist*, who had been victor at those games, brought out of Greece, 66 years after the same era; and the two Pythic victories, recorded in the Oxford Marbles, among innumerable others, which C. Ant. Septimius Publius, the *citharedist*, obtained during the reign of the emperor Septimius Severus, about the end of the second century.

We pass over the Nemæan and Isthmian games, and come to the Panathenæan. There were two solemn festivals under this denomination at Athens, the greater and the less; both of which were celebrated there in honour of Minerva, the patroness of that city. They must have been of very high antiquity, as their first institution was ascribed to Orpheus, to king Erichonius; and their renewal and augmentation to Theseus. The greater *Panathenæa* were exhibited every five years, the less every

three, or, according to some writers, annually. Though the celebration of neither, at first, employed more than one day, yet in after-times they were protracted for the space of many days, and solemnized with greater preparations and magnificence than at their first institution.

The first who obtained the prize here, on the *cithara*, according to the Oxford Marbles, was Phrynis, of Mitylene, about 457 years B. C. But this musician was not equally successful when he contended with Timotheus, who boasts, himself, of a victory he had obtained over him, in some verses preserved by Plutarch.

There were premiums likewise given to players on the flute, an instrument long in the highest estimation throughout all Greece, but in particular request at Athens; perhaps from the legendary account of its invention by Minerva, the protectress of that city. Aristotle tells us, that the flute, after its first invention, was used by mean people, and thought an ignoble instrument, unworthy of a free man, till after the invasion and defeat of the Persians; when ease, affluence, and luxury, soon rendered its use so common, that it was a disgrace to a person of birth not to know how to play upon it. Callias and Critias, celebrated Athenians, Archytas of Tarentum, Philolaus, and Epaminondas, were able performers on the flute. Indeed music in general was in such favour, and the study of it was thought so essential a part of education, at Athens, in the time of Pericles and Socrates, that Plato and Plutarch have thought it necessary to inform us of whom those two great personages received instructions in that art. Damon, the Athenian, was the music-master of both. The philosopher calls him his friend, in a Dialogue of Plato, where Nicias, one of the interlocutors, informs the company, that Socrates had recommended, as a music-master to his son, Damon, the disciple of Agathocles, who not only excelled in his own profession, but possessed every quality that could be wished in a man to whom the care of youth was to be confided.

Strabo says, it was the general opinion, that the Greeks had the chief part of their music, and musical instruments, from Asia and Thrace. And, according to Athenæus, lib. xiii. music was thought a necessary female accomplishment in the time of Darius; for this author tells us, that Parmenio wrote Alexander word, he had taken at Damascus three hundred and twenty-nine of the Persian monarch's concubines, who were all skilled in music, and performers on the flute and other instruments.

It was thought disgraceful for a gentleman not to be able to play upon the flute. Cornelius Nepos ranks it among the accomplishments of Epaminondas, that he could dance well, and play on the flute. But he was a Theban. It seems that Theban flute-players, and Lesbian lyrists, were always the most celebrated throughout Greece. The Thebans in general piqued themselves much upon being great performers on the flute. This is manifest from a passage in Dion Chrysostom: "The pre-eminence, says he, which all Greece unanimously allows to the Thebans, in this particular, has been constantly regarded by them as a point of great importance, of which I shall give an instance. After the total ruin of their city, which has never yet been rebuilt, no part of it being now inhabited but the small quarter called *Cadmea*, they gave themselves but little trouble in restoring any of the public monuments that had been thrown down or destroyed, one statue only of Mercury excepted, which they took great pains to dig out from among the rubbish, and to erect again, on account of the following inscription: *Ἑλλάς μὲν Θηβαίαν πρᾶξιεν αὐλοῖς*; "Greece has declared that Thebes wins the prize upon the flute." So that this statue is still standing in the old public square, among the ruins."

Pronomus, the inventor of a flute, upon which he could play in three different modes, was a Theban. Before his time, there was a particular flute for every mode or key; and so out of tune are the generality or modern flutes, (says Dr. Burney,) that it were almost to be wished the custom had still continued.

Antigenides, one of the most renowned musicians of antiquity,

antiquity, of whose life and talents such honourable mention is made in ancient authors, was a native of Thebes in Bœotia. He was invited to Athens by Pericles, and made music-master to his nephew Alcibiades. But Aulus Gellius relates, from a History of Music by Pamphila, that his scholar Alcibiades, setting up for a fine gentleman, and taking the utmost care of his person, was soon disgusted with his instrument, as Minerva herself had been before; for, happening to see himself in a mirror while he was playing, he was so shocked at the distortion of his sweet countenance, that he broke his flute in a transport of passion, and threw it away, which brought this instrument into great disgrace among the young people of rank at Athens. However, this disgust did not extend to the sound of the flute itself; since we find by Plutarch, that the great performers upon it continued long after to be much followed and admired. See *ANTI-GENIDES*, vol. i.

Dorion is mentioned by Plutarch as a flute-player who had made several changes in the music of his time, and who was head of a sect of performers, opponents to another sect of practical musicians, of which Antigenides was the chief; a proof that these two masters were contemporaries and rivals. It appears, from a passage in Xenophon, (*Memor. iv.*) that it was no uncommon thing for the Athenians to be divided into, what we should call, *fiddling factions*. Socrates, discoursing upon the advantages of concord in a state, says, "By concord, I mean that the city should agree, not in choosing the same poet, or praising the same flute-player, but in obeying the same laws."

How great a demand there was at this time for flutes, at Athens, may be conceived from a circumstance mentioned by Plutarch, in his Life of Isocrates. This orator, says he, was the son of Theodorus, a flute-maker, who acquired wealth sufficient by his employment not only to educate his children in a liberal manner, but also to bear one of the heaviest public burdens to which an Athenian citizen was liable; that of furnishing a *choir*, or *chorus*, for his tribe, or ward, at festivals and religious ceremonies. Each tribe furnished their distinct *chorus*; which consisted of a band of vocal and instrumental performers, and dancers, who were to be hired, maintained, and dressed, during the whole time of the festival: an expense considerable in itself, but much increased by emulation among the richer citizens, and the disgrace consequent to an inferior exhibition.

The importance of the flute is manifested by innumerable passages in ancient authors; among which there is one in Pliny that is diverting and curious. In speaking of comets, he says, that there were some *in the shape of flutes*, which were imagined to forebode some ill to music and musicians. And Montfaucon proves by several inscriptions from ancient marbles, that the sacrificial tibicen, at Athens was always chosen, and his name recorded, with the officers of state. This musician was called *Auletes*, and, sometimes *Spondaula*. His office was to play on the flute, close to the ear of the priest during sacrifice, some pious air, suitable to the service, in order to keep off distraction and inattention during the exercise of his function. Indeed there is no representation of a sacrifice, procession, banquet, or festive assembly, either in ancient painting or sculpture, without a musician. And the attendance of flute-players at sacrifices was so common in Greece, that it gave rise to a proverb, which was usually applied to such as lived at the tables of others: "You live the life of a flute-player." Because, as Suidas says, these performers being constantly employed at sacrifices, where the victims furnished them with a dinner, were at little or no expense in house-keeping.

The list of illustrious flute-players in antiquity is too numerous to allow a separate article to each. However, a few, besides those already mentioned, still hold their heads above the crowd, and seem to demand attention.

And among these, as a particular respect seems due to *inventors*, who, by genius or study, have extended the limits of theoretical or practical music, *Clonas* must not be passed by unnoticed. Plutarch, the only author by whom he is mentioned, tells us, that Clonas lived soon after the time of Terpander, and was the first who composed *nomos* for the flute, of which he specifies three that were much celebrated in antiquity, under the names of *Apothetes*, *Schœnion*, and *Trimeres*. This last air, which was sung by a chorus, must have been much celebrated; as Plutarch says, that, though the Sicyon Register gave it to Clonas, yet others, among whom was Plutarch himself, had ascribed it to Sacadas. The antique custom of giving names to tunes, has long been adopted in France; all the harpsichord-lessons of Rameau, and several other composers in that country, having particular denominations affixed to them; such as *La Timide*, *la Pantomime*, *l'Indiscrette*, *la Complaisante*, &c. And the same absurd custom now prevails in England; thus we have *le Retour de Windsor*, *le Retour de Hampstead*, &c.

Polymnestus, of Colophon in Ionia, was a composer for the flute, as well as an improver of the lyre; and it appears to have been no uncommon accomplishment for these ancient musicians to perform equally well upon both these instruments. Polymnestus is said to have invented the Hypo-Lydian Mode. This mode, being half a tone below the Dorian, which was the lowest of the five original modes, was, perhaps, the first extension of the scales *downwards*, as the Mixo-Lydian was *upwards*. Plutarch, who assigns to him this invention, accuses him of having taken greater liberties with the scale than any one had done before, though it is not now easy to discover in what those liberties consisted.

After speaking of so many flute-players of the male sex, it is but justice to say that they did not monopolize the whole glory arising from the cultivation of that instrument; as the performing upon it was ranked, in high antiquity, among female accomplishments. Its invention was ascribed by the poets to a goddess; it was the symbol of one of the muses; and it was never omitted in the representation of the fires.

The most celebrated female flute-player in antiquity was LAMIA; see vol. xii. p. 107. and p. 295 of this article. —Athenæus has recorded the names of a great number of celebrated *tibicinas*, whose talents and beauty had captivated the hearts of many of the most illustrious personages of antiquity; and yet the use of the flute among females seems to have been much more general in Persia than in Greece, by the account which Parmenio gives to Alexander of the female musicians in the service of Darius. See the preceding page.

Horace speaks of bands of female flute-players, which he calls *Ambubæarum Collegia*, and of whom there were still colleges in his time. But the followers of this profession became so numerous and licentious, that we find their occupation prohibited in the Theodosian Code; however, with little success: for Procopius tells us that in the time of Justinian, the sister of the empress Theodora, who was a *tibicina*, appeared on the stage without any other dress than a slight scarf thrown loosely over her. And these performers had at length become so common in all private entertainments, as well as at public feasts, obtruding their company, and placing themselves at the table, frequently unasked, that, at the latter end of this reign, their profession was regarded as infamous, and utterly abolished.

We have entered much more into biographical detail in the present section than our intention was when we began it. Our apology is this—It had been objected to us by some of our musical readers, that we had omitted, in the alphabetical order, the names of many eminent musicians; and, as we admit the charge to be just, we have now endeavoured to supply those omissions. Among other eminent names which should have appeared in former parts of the alphabet, is that of Epigonius, a mathematician



of Sicily, and native of Ambracia, celebrated by the ancients for the invention of an instrument of forty strings, which was called after his name, *epigonium*. When he lived is uncertain; but, as it was in times of simplicity, we may suppose that these strings did not form a scale of forty different sounds, but that they were either tuned in unisons and octaves to each other, or accommodated to different modes and genera. The twelve semitones of our three-stopped octave-harpichords include thirty-six different strings. The *magadis* of twenty strings, mentioned by Anacreon, had probably a series of only ten different sounds, the name of the instrument implying a series of octaves; for *magadizing* was a term used, when a boy, or a woman, and a man, sung the same part. The *simicium* of thirty-five strings mentioned by Athenæus must have been of this kind, like the arch-lute, double-harp, or double-harpichord.

Crexus, perhaps, should have an honourable place here, being recorded by Plutarch as the author of a considerable invention; that of "an instrumental accompaniment under the song," (*ὑπερὶ τὴν ᾠδὴν*;) whereas, before, says Plutarch, the accompaniment was "note for note," (*προσχορδα*.) As Plutarch plainly opposes this accompaniment to that which was in use before the time of Crexus, it can only be understood as a kind of *bourdon*, or *drone-bass*, under the voice part: a sense which appears to be supported by the use of the same phrase, in a problem of Aristotle, (the 40th,) where he speaks of *this* accompaniment and the voice *ending together*. It could not therefore have been a mere *ritornello*, or echo to the voice part, as M. Burette interprets it, taking *ὑπο* to mean *after*, not *under*, the voice.

Phrynis has already been mentioned, p. 359. as the first who gained the prize on the cithara at the Panathenæan games. According to Suidas, he was originally king Hiero's cook; but this prince, chancing to hear him play upon the flute, placed him for instruction under Aristocides, a descendant of Terpander. Phrynis may be regarded as one of the first innovators upon the cithara. He is said to have played in a delicate and effeminate style, which the comic poets, Aristophanes and Pherecrates, ridiculed upon the stage. The former in his comedy of the Clouds, and the latter in the piece quoted at p. 294. Plutarch, who frequently applies the same story and apophthegm to different persons, tells us, that, when Phrynis offered himself as a candidate at the public games in Sparta, he had two strings cut off his lyre by the magistrates, in order to reduce them to the ancient number. A similar disgrace to that which had happened to Terpander before, and to which Timotheus was forced to submit soon after.

Between the time of Alexander the Great and the conquest of Greece by the Romans, but few eminent musicians are upon record. The Grecian states never enjoyed true liberty and independence after the victory obtained over them at Cheronea, by Philip, the father of Alexander: the chief of these states remaining, after the death of these princes, under the Macedonian yoke, till they called in the Romans to their assistance; who, under Flaminius, restored to them the shadow of liberty, which was gradually diminished by the victories and devastations of Mummius, Sylla, and other commanders, till the time of Vespasian, who reduced all Greece to a Roman province.

In describing the music and musical instruments of the Greeks, those of the Romans have been included; yet, in order to preserve a kind of historical chain, and because we dismissed the subject of Roman music with too much brevity at p. 295. we shall here collect a few passages from the best historians to supply that omission: for, although the Romans were obliged to the Greeks for most of their arts, sciences, and refinements; yet, as there is no country so savage, where men associate together, as to be wholly without music, it appears that the Romans had in very high antiquity a rude and coarse music of their own,

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and had imitated the Etruscan musical establishments, both in their army and temples.

Dionysius Halicarnassensis, speaking of the antiquity of the Pelasgians, the inhabitants of Falerii and Fescennia, two ancient cities of Etruria, built in the Greek form, says, "the manner of their religious ceremonies was the same as those of Argos. Holy women served in the temple, and a girl unmarried, called *canephoros*, or basket-bearer, began the sacrifice, besides choruses of virgins, who hymned the goddesses in songs of their country." Now, as the Romans had an earlier communication with the Etruscans than with the Greeks, this passage renders it very probable that they were obliged to the people of Etruria for their religious ceremonies, and for *vocal music*. And the same author informs us, that "the Arcadians were the first who brought into Italy the use of Greek letters, and *instrumental music*, performed on the lyre, and those instruments called the trigon and the lydian; for the shepherd's pipe was the only instrument in use before that time."

Plutarch mentions it as a prevailing opinion, that the Greek language which was spoken by the Romans in the time of Romulus, was not corrupted by Italian words. From these accounts it appears that the Romans had not only vocal and instrumental music, as well as other arts and sciences, from Greece, but even their alphabet, language, religion, and all the learning of which they were possessed during the time of their kings, and the first ages of their republic; these having been originally Greek, though the Romans had them through Etruscan strangers.

The first Roman triumph, according to Dionysius, was that of Romulus over the Cæninenses; in which, clad in a purple robe, he was drawn in a chariot by four horses. The rest of the army, both horse and foot, followed, ranged in three several divisions, *hymning* their gods in songs of their country, and celebrating their general with *extemporary verses*. This account affords a very venerable origin to the *Improvisatori* of Italy; as the event happened in the fourth year of Rome, 749 years before Christ, and fourth year of the seventh Olympiad. The same author says, that the Roman prætors, in worshipping the Idæan goddesses, performed annual sacrifices and celebrated annual games in her honour, according to the *Roman, not Grecian*, customs: though the priests and priestesses of the goddesses were Phrygians. These carried her image in procession about the city, asking alms in her name, according to their custom, and wearing figures upon their breast, and striking their cymbals, while their followers played tunes upon their flutes, in honour of the mother of the gods.

These are the chief instances to be found in ancient history of original *Roman Music*; or at least of music that was not immediately derived from Greece. M. Rousseau, speaking of the *Scolia*, or Grecian songs, says, "This kind of songs passed from the Greeks to the Romans, and many of the Odes of Horace are Bacchanalian and love songs. But this nation, more military than sensual, for a long while made but a very gross use of music and songs, and never approached in these particulars the voluptuous grace and elegance of the Greeks. It seems as if melody always remained in a coarse and rude state among the Romans. Their hymeneal odes were rather noise and clamour than songs, and it is hardly to be presumed that the satirical songs of the soldiers, in the triumphs of their generals, consisted of a very agreeable melody."

Numa began his reign in the middle of the sixteenth Olympiad, 715 years before Christ, about the time when Pythagoras was in Italy. And, according to Dionysius, the sixth branch of his religious institutions was the establishment of the *Salii*, whom Numa himself appointed out of the patricians, choosing twelve young men of the most graceful appearance. These *Salii* were a kind of dancers and singers of hymns in praise of the god of war. The festivals were celebrated about the time of the Panathenæa at Athens, in the month of March, and at the



public expense; they continued several days, during which they proceeded dancing through the city to the Forum, and the Capitol, and to many other public and private places, beating time upon the *ancilia*, or sacred shields. The Romans called them *Salii* from their violent motions. And for the same reason, they called all other dancers *Saltatores*, because their dancing, also, was attended with frequent springing and leaping, in imitation of the *Salii*: "In the evolutions which they perform in arms, keeping time to a flute, says Dionysius, sometimes they move all together, sometimes by turns; and, in dancing, sing certain hymns, after the manner of their country. They seem to be the same as the Greek *curetes*." This account affords no very splendid idea of the Roman dancing, any more than it does of their music. Singing and dancing together, during such violent exertions of activity and agility, must have enfeebled both.

Servius Tullius, who began his reign 578 B. C. in forming the people into classes and centuries, is related by the Roman historians to have ordained that two whole centuries should consist of *trumpeters, blowers of the horn, &c.* and of such as, *without any other instruments, sounded the charge*. This shows the number and the importance of military musicians in the Roman state near 600 years before Christ.

And in the laws of the Twelve Tables, instituted about the time that the power of the Decemvirs was abolished, 450 B. C. among those concerning religious rites, we find the two following: I. Let the cryer proclaim the funeral. Let the master of the funeral, in the games, make use of a public officer, and lictors. Let it be lawful for him to make use of three square mantles in the funeral, a purple fillet for the head, and *ten players on the flute*. Let him do no more than this. XII. Let the praises of honoured men be displayed in an assembly of the people; and let mournful songs, accompanied with a flute, attend those praises.

According to Servius, Macrobius, and Horace, nuptial songs, which were afterwards refined and polished into epithalamiums, were first used by the people of Fescennia, a city of Etruria, and therefore called *Versus Fescennini*. This kind of poetry, in its original, was gross and obscene, though long authorised by custom. Young people, instead of throwing the stocking, in the manner of our villagers, sung the *Fescennina* before the apartment of the new married pair.

Livy gives a kind of history of the Roman drama, which, as well as the Grecian, was inseparable from music. The passage is so curious, that we shall insert it entire. "The plague continued, says Livy, to rage this year (364 B. C.) and the following. The most remarkable occurrence during this period was, that, in order to obtain mercy of the gods, a public feast called *Læstiferium* was celebrated for them, which was the third entertainment of this kind that had been made since the building of the city. But the magistrates, finding that the violence of the pestilence was neither abated by human prudence nor divine assistance, and having their minds filled with superstition, among other means which were tried in order to appease the incensed deities, are said to have instituted the games called *Sevici*, which were amusements entirely new to a warlike people, who, before this time, had none but that of the circus. These theatrical representations, like the beginnings of most other things, were at first inconsiderable, and borrowed from foreigners; for actors were sent for from Etruria, who, without verses, or any action expressive of verses, danced, not ungracefully, after the Tuscan manner, to the flute. In process of time the Roman youth began to imitate these dancers, intermixing raillery in unpolished verses, their gestures corresponding with the sense of the words. Thus were these plays received at Rome; and, being improved and refined by frequent performances, the Roman actors acquired the name of *listriones*, from the Tuscan word *hister*, which signifies a stage-player. But their dialogue did not consist

of unpremeditated and coarse jests, in such rude verses as were used by the *Fescennini*; but of satires, accompanied with music, set to the flute, and recited with suitable gestures. And some years after, Livius Andronicus first ventured to abandon satires, and write plays with a regular and connected plot. After satires, which had afforded the people subject of coarse mirth and laughter, were, by this regulation, reduced to form, and acting, by degrees, became an art, the Roman youth left it to players by profession, and began, as formerly, to act farces at the end of their regular pieces. These dramas were soon after called *Erodia*, and were generally interwoven with the *Atellane* comedies. These were borrowed from the Osci, and always acted by the Roman youth, who would not allow them to be disgraced by professed actors. Hence it has been a rule for those who performed in such pieces not to be degraded from their tribe, and they were allowed to serve in the army as if they never had appeared on the stage." Book vii. c. 2.

The circumstance of these plays having been first represented on account of the plague, proves theatrical exhibitions to have been originally *religious institutions* among the Romans, as well as the ancient Greeks; and the importance of music in religious ceremonies is put out of all doubt by another curious passage in Livy, where he has recorded the effects of repentment in the Roman musicians, who used to perform at sacrifices, and who, upon an imaginary affront, left the city in a body. The relation of the historian seems to merit a place here without abridgment. "I should omit a circumstance, says he, hardly worth mentioning, if it did not seem connected with religion. The *tibicines*, or flute-players, taking offence at the preceding censors refusing them the privilege of eating in the temple of Jupiter, according to traditional custom, withdrew in a body to Tibur, so that there were no performers left to play before the sacrifices. This created religious scruples in the minds of the senators; and ambassadors were sent to Tibur, to endeavour to persuade the fugitives to return to Rome. The Tiburtines readily promised to use their utmost endeavours to this end, and, first summoning them before their senate, exhorted them to return to Rome; but, finding them deaf to reason or intreaty, they had recourse to an artifice well suited to the dispositions of these men. For, upon a certain festival, they were all invited by different persons, under pretence of assisting in the celebration of a feast. As men of this profession are generally much addicted to wine, they were supplied with it, till, being quite intoxicated, they fell fast asleep, and in this condition were flung into carts, and carried to Rome; where they passed the remaining part of the night in the Forum, without perceiving what had happened. The next day, while they were full of the fumes of their late debauch, upon opening their eyes they were accosted by the Roman people, who flocked about them; and, having been prevailed upon to stay in their native city, they were allowed the privilege of strolling through all the streets in their robes, three days in every year, playing upon their instruments, and indulging themselves in those licentious excesses which are practised upon the same occasion to this day. The privilege of eating in the temple was also restored to such of them as should be employed in playing before the sacrifices." Book ix. c. 30. This adventure happened 309 years B. C. while the Romans were preparing for two very dangerous wars.

But, notwithstanding the importance of these flute-players to the celebration of religious rites, music seems to have arrived at no very great degree of refinement or perfection, or to have been much in use on other occasions, till after the conquest of Antiochus the Great, king of Syria; and it is mentioned by Livy, as a memorable æra of luxury, that the custom was then first introduced at Rome of having *psalteria*, or female musicians, to attend and perform at feasts and banquets in the Asiatic manner.



Indeed the Romans were later in cultivating arts and sciences than any other great and powerful people; and none of them seem to have been the natural growth of the soil, except the art of war: all the rest were brought in by conquest. For it has been shown already, that before their acquaintance with the Greeks they had all their refinements from the Etruscans, a people very early civilized and polished. Cicero, in his second Book of Laws, tells us, that before Greece and her arts were well known to the Romans, it was a custom for them to send their sons for instruction into Etruria. And thence they had the first ideas, not only of religion but of poetry, painting, sculpture, and music, according to the confession even of their own historians.

With respect to *Etruscan music*, whoever regards the great number of instruments represented in the fine collection of antiquities published under the patronage of sir William Hamilton, as well as in that published at Rome, since, by Passerio, must be convinced that the ancient inhabitants of Etruria were extremely attached to music; for every species of musical instrument that is to be found in the remains of ancient Greek sculpture is delineated on the vases of these collections; though the antiquity of some of them is, imagined to be much higher than the general use of the instruments represented upon them was, even in Greece.

Besides the obligations which the Romans had to the Etruscans and Greeks for their taste and knowledge in the fine arts, the conquest of Sicily 200 years before the Christian æra, contributed greatly to their acquaintance with them. Indeed there was no state of Greece which produced men of more eminence in all the arts and sciences than *Sicily*, which was a part of *Magna Græcia*, and which, having been peopled 719 years B.C. by a colony of Greeks from Corinth, their descendants long after cherished and cultivated science of all kinds, in which they greatly distinguished themselves, even under all the tyranny of government with which they were oppressed. Fabricius gives a list of seventy Sicilians who have been celebrated in antiquity for learning and genius, among whom we find the well known names of *Zechylus*, *Diodorus Siculus*, *Empedocles*, *Gorgias*, *Euclid*, *Archimedes*, *Epicharmus*, and *Theocritus*. To the Sicilians is given not only the invention of pastoral poetry, but of the wind-instruments with which the shepherds and cowherds used to accompany their rural songs.

After the conquest of Greece, the Romans had the taste to admire and adopt the Grecian arts. And Montequieu remarks, that one of the chief causes of the Roman grandeur, was their method of abandoning their ancient customs, and adopting those of the people whom they had vanquished, whenever they found them superior to their own.

With respect to the musical instruments used by the Romans, as they invented none themselves, all that are mentioned by their writers, can be traced from the Etruscans and Greeks. Indeed the Romans had few authors who wrote professedly upon the subject of music, except St. Augustine, Martianus Capella, Boethius, and Cassiodorus; who, though they lived in the decline of the empire, yet made use of Greek principles, and explained those principles by Greek musical terms. Of these, St. Augustine was born in Africa, A.C. 354, and died 430. Besides the six books written by him upon music, which are printed in the folio edition of his works at Lyons, 1586, there is a MS. tract of his writing, in the Bodleian Library at Oxford, entitled *De Musica*; but it is nothing more than a sermon in praise of church-music; nor do his six books contain any other rules than those of metre and rhythm. Martianus Capella, who flourished in 470, was likewise an African. He, as well as St. Austin, wrote upon the seven liberal arts. His ninth book, the only one which concerns music, has been commented by Meibomius, at the end of the third Book of Aristides Quintilianus, from whom it is almost wholly taken. Boethius

was born at Rome, in 470, and put to death by order of Theodoric, the Goth, in 525. He wrote five books on music, which were first printed in black letter, with his Treatises on Arithmetic and Geometry, at Venice, 1499. Cassiodorus flourished in the time of Theodoric, in the sixth century, and died in 562, at the age of 93. He wrote of the Seven Liberal Arts, *De septem Disciplinis*. The whole of his musical work, which is hardly the skeleton of a treatise, is a repetition of what his predecessors have said on the subject; and all these Latin musical tracts are but bullets of the same caliber. They teach no part of music but the alphabet, nor can any thing be acquired by the most intense study of them, (says Dr. Burney,) except despair and the head-ach.

Vitruvius, in his Treatise upon Architecture, has inserted a chapter upon music, in which he has given the harmonical system of Aristoxenus; but he introduces it with a complaint of the unavoidable obscurity of musical literature, on account of the deficiency of terms in the Latin tongue to explain his ideas. "The science of music, in itself obscure, says he, is particularly so to such as understand not the Greek language." This writer, therefore, who seems to have been the first that had treated of music in the Roman language, confesses the necessity he was under of using Greek appellatives, not only for the notes, but for other parts of the art; which shows, if not the low state of music at Rome when he wrote, which was in the Augustan age, at least whence their music came; and *borrowing* implies *inferiority*. Indeed, the writings of Cicero show that philosophy, and all the arts and sciences, were wholly furnished to the Romans from Greece, even in the most enlightened time.

Music was, however, in great favour at Rome, during the latter end of the republic, and the voluptuous times of the emperors: the stage then flourished; the temples were crowded; festivals frequent; and banquets splendid: so that we may suppose it to have been very much used both upon public and private occasions, in so rich, populous, and flourishing, a city as Rome, the mistress of the world.

Livy mentions a hymn composed by P. Licinius Tegula, in the 352d year from the building of the city, on occasion of some prodigies which, from a supposition that the gods were angry, had greatly alarmed the citizens. This hymn was sung by twenty-seven virgins in procession through the streets of Rome. The *Carmen Seculare* of Horace, more especially his *Dianam teneræ*, are very curious relics of *vocal* poetry; of verses written for music; and, as the form and measures of his odes are Greek, the music may fairly be supposed to have been in the Greek style. Catullus's Hymn to Diana is another remain of the same kind.

A passage in Cicero would incline us to imagine that the laws of contrast, of light and shade, of loud and soft, of swelling and diminishing sounds, were understood by the musicians of his time as well as by those of the present. For, after speaking of the use of *contrast* in oratory, poetry, and theatrical declamation, he adds: "Even musicians have known its power; as is manifest from the care they take to lessen the sound of instruments, in order to augment it afterwards: to diminish, to swell, to vary, and to diversify." De Oratore, lib. iii. c. 102.

This orator frequently mentions, in his Familiar Letters, Philosophical Works, and even Oration, the keeping a band of musicians as a general practice among persons of rank: these were called *servi symphoniaci*, and *pueri symphoniaci*. In his Oration in *Q. Cæcilius*, quæstor to Verres, speaking of the extortions and abuses of Verres and his quæstor, he mentions Cæcilius protesting the admiral of Anthony, who had by violence taken from a Sicilian lady, named Agonis, her *servos symphoniacos*, in order to make use of them on-board his fleet.

The shepherd's oaten pipe, among the Romans, seems to have been sometimes made use of in their public assemblies to express disapprobation: it was certainly louder and more powerful than hissing could be, and gave a harsh, jarring,



jarring, ungrateful, noise: "Stridenti miserum stipulâ dispendere carmen." Cicero calls it *fistula pistoria*, which might be Englished, "a Roman catcall."

According to Apuleius, who discovers himself in many parts of his writings to have been an excellent judge of music, it must have been much cultivated, and well understood, in his time, which was the second century. He describes the several parts of a musical entertainment in the following manner: "She ordered the cithara to be played, and it was done: she asked for a concert of flutes, and their mellifluous sounds were immediately heard: she, lastly, signified her pleasure that voices should be joined to the instruments, and the souls of the audience were instantly soothed with sweet sounds." Book xi.

The same author likewise describes a musical performance at the celebration of a great festival in honour of Ceres, or Isis, at the time of his own initiation into the Eleusinian mysteries, in such a manner as would suit many modern performances. "A band of musicians now filled the air with a melodious concert of flutes and voices. They were followed by a chorus of youths, dressed in white robes, suitable to the solemnity, who alternately sung an ingenious poem, which an excellent poet, inspired by the muses, had composed, in order to explain the subject of this extraordinary festival. Among these, marched several players on the flute, consecrated to the great Serapis, who performed many airs dedicated to the worship of the god in his temple. After this, the venerable ministers of the true religion shook with all their force the sistrums of brass, silver, and gold, which produced tones so clear and sonorous, that they might have been heard at a great distance from the place of performance." Book v.

One great impediment to the progress of music among the Romans was, that they wholly abandoned to their slaves the practice of the liberal arts; and the greater their talents, the more severely were they in general treated. Whereas the Greeks, on the contrary, confined the exercise of those arts, as the epithet *liberal* implies, to *free men*, and persons of birth and rank, forbidding their slaves the study and use of them. Whence it is easy to imagine which of these two nations would bring them to the greatest degree of perfection. "What Nature was to the Greeks, says the abbé Gedeon, the Greeks were to the Romans, as the natives of Greece had no other example than Nature herself to follow; for no nation, with which they had any intercourse, was learned and polished before them. The Romans, on the contrary, had the Greeks for models."

Notwithstanding all the assistance which the Romans received from the Greeks in the polite arts, and all the encouragement of these institutions, they never advanced so far in them as the modern Italians have done; who, without any foreign help, have greatly surpassed not only their forefathers the ancient Romans, but even the Greeks themselves, in several of the arts, and in no one so much as that of music, in which every people of Europe have, at different times, consented to become their scholars.

We now proceed to give a description of the instruments represented on the annexed Plate XV. most of which have been alluded to, and their origin pointed out, in the preceding enquiry, which, though it has extended to a much greater length than we intended, has not, we hope, been found uninteresting. The only observation we have now to make, is one which has probably already occurred to the reader; namely, that the different claimants among the Greeks to the same musical discoveries, only prove that music was cultivated in different countries; and that the inhabitants of each country invented and improved their own instruments, some of which happening to resemble those of other parts of Greece, rendered it difficult for historians to avoid attributing the same invention to different persons. Thus the single flute was given to Minerva, and Marsyas; the syrinx, or fistula, to Pan, and to Cybele; and the lyre, or cithara, to Mer-

cury, Apollo, Amphion, Linus, and Orpheus. Indeed, the mere addition of a string or two to an instrument without a neck, was so obvious and easy, that it is scarcely possible not to conceive many people to have done it at the same time.

Fig. 1. represents the head of a *tibicen*, or flute-player, to show the *capistrum*, or bandage, used for the purpose of augmenting the force of the wind, and for preventing the swelling of the cheeks of the performer. See p. 295 and 352. These flutes are equal in diameter and length; and, as no holes are visible in them, they must have been of the trumpet-kind. The drawing of this was made from a vase in Sir William Hamilton's Collection of Etruscan Antiquities, vol. i.

The two instruments of the flute kind which Nature has constructed, and from which mankind, taught perhaps by the whistling reeds, first tried to produce musical sounds, seem to have been the shells of fishes, and the horns of quadrupeds; and the *μουσικός*, or single pipe, appears in sculpture to have been a mere *horn* in its natural form. Then succeeded the *avena*, or single oaten stalk; the *calamus*, or single reed, or cane; and afterwards the *syrinx*, or *fistula*, composed of a number of reeds, of different lengths, tied together. These simple instruments preceded the invention of *foramina*, or holes, by which different sounds could be produced from the same pipe. The *tibia* was originally a flute made of the flank, or shin-bone, of an animal; and it seems as if the wind-instruments of the ancients had been long made of such materials as Nature had hollowed, before the art of boring flutes was discovered. That once known, they were formed of box-tree, laurel, brass, silver, and even of gold.

There are certain epithets applied to the theatrical flutes in the titles to the comedies of Terence, which have extremely embarrassed the critics: such as *pares*, *impares*, *dextra*, *sinistra*; and it has been long doubted, whether *pares* and *impares* meant double and single flutes, or equal and unequal in point of length and size. Dr. Burney inclines to the latter: for in none of the representations in ancient painting or sculpture, which he had seen, does it appear that the *tibicen*, either at sacrifices or in the theatre, plays on a single flute, though we as often see double flutes of different lengths in his hands as of the same length; and, as harmony, or music in different parts, does not appear to have been practised by the ancients, the flutes of equal length may naturally be supposed to imply unisons; and *unequal*, such as are octaves to each other. But, as to the distinction between *right-handed* and *left-handed* flutes, the doctor owns himself far from being possessed of any clear and decisive idea concerning it. And, indeed, the flute had so many different names in the classics, and is applied to so many different purposes, that M. le Fevre, who had undertaken their explanation, ended his fruitless labours by a copy of Latin verses in praise of Minerva, for throwing the flute into the sea, (see p. 351.) and anathematizing those who should take it out. It has been imagined by the abbé du Bos, that, when the theatrical flutes were unequal, a drone-bass was performed on the largest; but the necessity of a clear and undisturbed elocution on the stage, joined to the tenderness of the ancients for poetry, would have rendered the noise and confusion of a drone-bass more offensive to such as attended to the interest of the drama, than the most florid and complicated counterpoint. It is no uncommon thing to see one of the unequal flutes used upon these occasions straight, and the other curved at the end, as at fig. 2. Hefychius, as quoted by Bartholinus, says that the horned-flute was for the left hand, the straight one for the right. That the *longest* of the two instruments was for the left hand, Pliny seems to prove, when he speaks of cutting the reeds with which they were made; for he says the part next the ground, being the widest, serves for the left-hand flutes, &c. These passages, however, furnish no proofs of their being destined for different parts, or any thing more than octaves





*Musical Instruments of the Greeks and Romans.*





to each other. Most of the double flute-players represented in sculpture appear to grasp the instruments, without any motion of the fingers; nor indeed in many of them are there any holes in sight to employ them; which makes it probable that they were modulated by the mouth, like trumpets and horns.

Another difficulty occurs about these flutes being *always double*, as in fig. 1, 2, 3. that is, two single tubes held in different hands, or uniting in one mouth-piece. But, as we never see more than *one* performer at a time represented in painting or sculpture, accompanying the actors on the stage, or the priest at the altar, where these double or Phrygian flutes were chiefly used, they may perhaps have been preferred for their superior loudness; for force must not only be necessary to the voice in a large temple or theatre; but also to the instruments that accompanied it, in order to the being heard by such a numerous audience as was usually assembled there; just as the actor's voice was augmented by a mask, and his height increased by stilts. The muzzles and bloated cheeks in representations, corresponding with verbal descriptions, prove that *quantity* of sound was the principal object of the ancients. Hence the necessity of the *capistrum*, or head-stall, as it appears in the present figure.

The defects peculiar to wind-instruments seem to have been as well known to the ancients as the moderns; and Aristoxenus complains of them in such strong terms as would be very applicable to the flutes of modern times: "Flutes are continually shifting their pitch, and never remain in the same state." Among many expedients to which he says performers had recourse, in order to palliate these defects in the intervals, the use of *wax*, occasionally, in the holes of their instruments seems to have been one; at least Meibomius, in his note on the passage, understands *wax* to be meant as one method; for Aristoxenus, speaking of wind-instruments, talks of *adding* and *taking away*. This expedient must, however, have been used in order to supply the want of skill in boring flutes; and the wax, in warm climates, would be too subject to fusion for a performer to depend much upon its assistance in the *heat* of action.

That the ancients used *natural* reeds and canes in the construction of their flutes, we are certain; but whether they had any such *artificial* reeds as we use for our hautbois, bassoons, &c. is doubtful. We find, indeed, in Plutarch's Dialogue, mention of a *fyrynix*, or small pipe, that was sometimes affixed to flutes; which M. Burette translates *hanche*, a word equivalent to our *reed*. But the impropriety of the translation is fully proved by a passage in another treatise of Plutarch, where he gives it as a musical problem, "Why the flute, when the *fyrynix* is *drawn up*, becomes sharpened in *all its sounds*; that is, has its whole pitch raised; and when it is *let down*, or rather *laid down*, *κλινομένης*, as if it was fixed to the instrument by a kind of hinge, is again flattened." The purpose, therefore, of this pipe or *fyrynix*, was totally different from that of our reeds, and was merely to alter the *pitch* of the flute. Nor was it at all necessary to the instrument, as our reeds are; for Plutarch relates, in the part of his Dialogue above-mentioned, that Telephanes "had such an aversion to these pipes, he would never suffer the flute-makers to apply them to his instruments;" which was the principal reason why he never entered the lists at the public games, where these additional pipes seem to have been much in vogue; and, indeed, if their effect rendered the intervals as false as those of our flutes are by drawing out the middle pieces, it was a proof of his judgment, and delicacy of ear. "If any part of the ancient flutes answered to our reeds, it must have been what they called 'the tongue,' *γλωττις*, *lingula*. This appears to have been essential to the use of the instrument, as our reeds are. The flutes could scarcely be made to *speck* without it; hence the saying of Demades, the Athenian orator, who compared his countrymen to flutes, "they were good for nothing without their tongues." (Stob. Ser. 2.) These *lingula*

were also *movable*, and carried about by the performers in little boxes, which were called *γλωττοκασμια*, or tongue-cases," as our reeds are at present. "The resemblance of these tongues and reeds in construction, as well as in use, may perhaps appear the more probable to the reader from an engraving, (says Dr. Burney,) of a medal in the Numismata Pembrochiana, which was pointed out to me by the Hon. Daines Barrington. On one side is Cleopatra; and on the other, a winged musician playing on an instrument which seems to be furnished with an artificial reed; of which I shall only observe, that it is the strongest proof I have met with, in coins or in sculpture, of the use of such an expedient among the ancients, and that there cannot be a more striking likeness of a modern hautbois."

Fig. 2. is a double flute of an uncommon kind, on a bas-relief in the Farnese collection at Rome. These tubes, of different lengths, with keys or stopples, are blown at once by a female Bacchanal. Vossius, De Poemat. Cant. p. 110. says, from Proclus, that every hole of the ancient flute furnished at least three different sounds; and, if the *παράρτυπνα*, or side-holes, were opened, still more than three. Arcadius Grammaticus says, that the inventors of the holes of the flute contrived a method of stopping and opening them at pleasure, by certain horns, or pegs, which, by turning them in and out, and moving them up and down, multiplied sounds, according to Vossius, like different strings upon a lyre. But that could not be the case in this instrument, at least *during performance*, as most of the plugs or stopples were out of the reach of the musician's hand; besides, the hands were employed in supporting the instrument; and though, in our bassoon, and even hautbois and German flute, we are able, by means of keys, to open and close holes which the fingers cannot reach; yet, as no such expedients appear in the representations of ancient wind-instruments, it is difficult to assign any other use to these plugs or stopples than that already mentioned, of adjusting the scale to some particular mode or genus, *before performance*, as our trumpets or horns are tuned to keys of different pitch by means of crooks, and our flutes by middle-pieces of different lengths. It seems as if the longest of the two tubes in this figure, had a horn joined to the end of it, which gives it the form of a *lituus*. Bartholinus, De Tib. Vet. makes this curvature at the end the characteristic of the Phrygian flute: he gives two flutes of this kind, with plugs, one straight and the other curved; and tells us, from Aristotle's Acoustics, that loudness and clearness were acquired by the addition of the horn.

Fig. 3. represents a Cupid, playing on two flutes with stopples, or plugs, like the preceding, but without the horn at the end. From an ancient painting in the Museo at Portici.

An instrument of the bassoon kind, called the *courtant*, with two rows of projecting apertures, resembling those in fig. 2 and 3, is described by Merfennus, De Instrum. Harmon. lib. ii. who tells us that the *tetines*, (or nipples,) as he calls the projections, were not movable, but fixed; and that, when those on one side were used, those on the other were stopped with wax.

Fig. 4. represents the ancient *lituus*, or octave trumpet, in the possession of sir Joseph Banks, of which a full description has been given at the word *LITUUS*, vol. xii. p. 230.

Fig. 5. An ancient instrument, of a very peculiar kind, lately dug out of Pompeia, a city that was destroyed by an eruption of Mount Vesuvius, at the same time as Herculaneum. It is a trumpet or large tube of bronze, surrounded by seven small pipes of bone or ivory, inserted in as many of metal: these seem all to terminate in one point, and to have been blown through one mouth-piece. The small pipes are all of the same length and diameter, and were probably unisons to each other, and octaves to the great tube. There is a ring to fasten a chain to, by which it was slung over the shoulder of the performer.

The instrument was found in the corps de garde of this subterraneous city, and seems to have been the true military *clangor tubarum*.

Fig. 6. Pan playing on the *syrix*, from an ancient basso-relievo of Greek sculpture, in the Giustiniani palace at Rome, representing the nursing of Jupiter by Amalthea. This figure holds in one hand the *syrix*, and in the other a horn, resembling the *shawm* represented upon the arch of Titus, among the Hebrew instruments supposed to have been copied from those which this emperor had brought from Jerusalem.

The pipes of the *fistula Panis*, or *syrix*, being composed of reeds or canes cut just below the joint, were all stopped-pipes, like those in the stopped diapason of the organ, in which the wind is emitted at the same place where it enters; and, as it has a double motion to make, twice the length of the tube, the tone is an octave lower of a stopped-pipe than of an open one of the same length and diameter. The *fistula Panis* of the island of New Amsterdam, in the South Seas, is made of canes cut below the joints, and consequently of stopped-pipes; and the pipes of an Arabian instrument of the same kind, which Dr. Burney received from Aleppo, are all stopped at the end with wax. See p. 350, 1.

Fig. 7. A *hexachord*, or lyre with six strings, in the hand of a Grecian Apollo, in the Capitoline Museum at Rome. The three openings at the bottom seem designed to answer the purpose of sound-holes in the belly of the instrument.

Fig. 8. A lyre in the famous ancient picture dug out of Herculaneum, upon which Chiron is teaching the young Achilles to play. See p. 353.

Fig. 9. The tripodian lyre of Pythagoras the Zacynthian, from a bas-relief in the Maffei palace at Rome, representing the whole choir of the Muses. Athenæus gives the following account of this extraordinary instrument: "Many ancient instruments are recorded, says Artenon, of which we have so little knowledge, that we can hardly be certain of their existence; such as the tripod of Pythagoras the Zacynthian, which, on account of its difficulty, continued in use but a short time. It resembled in form the Delphic tripod, whence it had its name. The legs were equidistant, and fixed upon a movable base that was turned by the foot of the player; the strings were placed between the legs of the stool; the vase at the top served for the purpose of a sound-board, and the strings of the three sides of the instrument were tuned to three different modes, the Doric, Lydian, and Phrygian. The performer sat on a chair made on purpose. Striking the strings with the fingers of the left-hand, and using the plectrum with the right, at the same time turning the instrument with his foot to whichever of the three modes he pleased; so that, by great practice, he was enabled to change the modes with such velocity, that those who did not see him, would imagine they heard three different performers playing in three different modes. After the death of this admirable musician, no other instrument of the same kind was ever constructed."

Fig. 10. An Etruscan lyre, with seven strings, in the Collection of Etruscan, Greek, and Roman, Antiquities, published from the cabinet of Sir William Hamilton, vol. i. With respect to this instrument, it is worthy of observation, that, though the vase upon which it is represented is of such indisputable and remote antiquity, the tail-piece, bridge, belly, and sound-holes, have a very modern appearance, and manifest a knowledge in the construction of musical instruments among the Etruscans, superior to that of the Greeks and Romans in much later times. The lower part of the instrument has much the appearance of an old bass-viol, and it is not difficult to discover in it more than the embryo of the whole violin family. The strings lie round, as if intended to be played on with a bow; and even the cross-lines on the tail-piece are such as we frequently see on the tail-pieces of old violis.

Fig. 11. The *tibia utricularis*, or bagpipe, taken from a

bas-relief in the court of the Santa Croce palace at Rome. This instrument appears not to have been wholly unknown to the Greeks, who, according to Montfaucon, called it *ασκαυλος*. Dr. Burney also saw the representation of one in marble, of ancient Greek sculpture, in the possession of Mr. Morrison, at Rome. It seems, however, to have been a Roman invention to which a Greek name was given; a piece of affectation that was generally practised upon every occasion, about the time of Nero. Greek was the *French* of the Romans. The term does not occur, however, in H. Stephens, Scapula, Meursius, Suicer, nor in Scott. In Faber's and Martin's Latin Dictionaries, *ascaules* is to be found, with a reference to Seneca, Vopiscus, and Martial. The two former use *pithaulos*, the one in Epist. lxxvi. and the other in the Life of Carinus, vol. ii. where the word is explained and illustrated by an elaborate note of Salmassius. Martial, lib. x. ep. 3. gives *canus ascaules*. From the silence of lexicographers, we may conclude that the word appears in no Greek author. Isaac Voissius strenuously denies that *utricularius* means a player on a *bagpipe*: the instrument in question was, according to him, an organ blown by bellows, as distinguished from the hydraulic or water organ; "but to suppose," says he, "that the *utricularius* was like our wretched mendicants that stroll about, is most ridiculous!" A passage, however, in Dion Chrysostom, clearly proves this enthusiastic admirer of ancient music to have been mistaken. For, speaking of Nero, the Greek writer says, that he played on the flute "with a bladder, or leathern bag of wind, under his arm." And for this he assigns a reason which is curious; "that he might avoid making the ugly faces with which Minerva was so much offended." Nothing can describe a modern bagpipe more decisively. According to Suetonius, when Nero heard of the revolt by which he lost his empire and life, he made a solemn vow, that, if it should please the gods to extricate him from his present difficulties, he would perform in public on the bagpipe. Suet. in Nerone, 54.

On an ancient gem in the possession of Sig. Tellari at Cortona, of which an impression was sent to Jos. C. Walker, Esq. of Dublin, who favoured Dr. Burney with a drawing of it, there is engraved an Apollo, crowned, after vanquishing Marsyas, with a lyre in his hands, and a bagpipe behind him. The name of the artist appears on the gem; an uncommon circumstance, as the workmanship is not of the first class. This gem is represented at fig. 12.

It is probable that the union of the bagpipe with the *syrix* suggested the first idea of an organ. We shall therefore assume this as the connecting link between ancient instruments and modern. The correct figure we have presented of the ancient *utricularis* will give a very good idea of the common bagpipe of our days. It consists of two principal parts: The first, a leathern bag, which is blown up like a foot-ball, by means of a port-vent, or little tube, fitted to it, and stopped by a valve. The other part consists of three pipes or flutes; the first, called the great pipe, or *drone*; and the second, the little one, which passes the wind only out at the bottom; the third has a reed, and is played on by compressing the bag under the arm when full, and opening or stopping the holes, which are eight, with the fingers. The little pipe is ordinarily a foot long; that played on, thirteen inches; and the port-vent six. The bagpipe takes in the compass of more than three octaves; namely, from A on the first space in the bass, to D in alt, above the seventh line, or second ledger line, in the treble.

#### IV. MUSICAL INSTRUMENTS of the MODERNS.

Musical instruments may be classed, generally, under the following heads: stringed instruments, wind-instruments, and instruments of percussion; according to the three ways of producing sound; namely, by the vibration of strings, by the collision of air enclosed in pipes or tubes, and by the vibration of elastic bodies. Dr. Crotch divides modern instruments into—1st, keyed instruments, whether



ther wind or stringed; 2d, stringed instruments played on by the bow; 3d, wind-instruments without keys; 4th, instruments of percussion. But this division is confessedly imperfect, because the harp, guitar, &c. are stringed instruments which do not answer either of the above descriptions, as they neither have keys nor are played by the bow. But, as they are seldom used in concerts, except in solo concertos, it did not come within the object of Dr. Crotch's work to give a particular account of them. But, in any arrangement that we can make, the first place will of course be occupied by that most noble and comprehensive instrument,

The ORGAN.—This largest and most harmonious of all instruments, is called the organ, *ὄργανον*, or "the instrument," by way of excellence.

That organs are the invention of remote antiquity has been argued, and seems now to be generally allowed; but the particular time and country in which the discovery was made, appears to be lost amidst the ruins of time. In ancient authors, there is a variety of passages where mention is made of the *organ*; but it is at least possible that an instrument is meant very different from that which now goes by the same name. From St. Augustin's commentary on the 4th verse of the 150th Psalm, we learn, that the Greeks had another name for those instruments in which bellows were employed; that the name *organ* was appropriated to this particular instrument merely from the usage of the Latin tongue; and that it was indifferently given to all instruments used to accompany the voice in concert. We mention this, not because we doubt of the antiquity of the organ, but merely to show that the time of its invention cannot be determined by the era of the authors where its name occurs.

The most ancient proof of an instrument resembling a modern organ blown by bellows, and played by keys, very different from the *hydraulicum*, or water-organ, (which is of much higher antiquity,) is a Greek epigram in the Anthologia, attributed to the emperor Julian the Apostate, who flourished about A. D. 360.

Ἀλλοιὴν ὄρω δοξαῶν φρεσὶν ἦπερ ἀπ' ἀλλῆς  
 Χαλκίης ταχα πολλὸν ἀνεβλάστησαν ἀρετῆς.  
 Ἀργιοί, εὐδ' ἀνεμοσὶν ὑφ' ἡμέτερος δονεοῖται,  
 Ἀλλ' ὑπο ταυρείης προθορῶν σπληγγος αἰλῆς  
 Νεβθεν εὐτερίων καλαμῶν ὑπο εἰς αἶαν οὐδενί.  
 Καὶ τις αὐτῇ ἀγερωχός, ἔχων δῶα δακτύλα χεῖρος,  
 Ἰσάται ἀμφαφῶν κανόνας συμφραδμονίας αὐλῶν  
 Οἱ δ' ἀπαλὸν σκιρτῶντες ἀποθλίβουσιν σοῖδον.

Reeds strike my wond'ring eyes, unknown before,  
 Sprung from some brazen soil, some foreign shore;  
 Fruitless our efforts, for in vain we blow  
 Till, from a cave of leather, winds below  
 To hollow pipes harmonious powers impart:  
 Then, if some master, in th' Orphéan art  
 Experienc'd, touch the well-according keys,  
 Instant they warble, and responsive please.

Merfennus has inserted a Latin translation of this epigram, in his lib. iii. De Organis; and Zarlino, who wrote in 1571, is of opinion, that the organ here mentioned was essentially the same with the organ of his time. But, though we have already given a poetical translation, we think it right to give a literal one also, since the meaning of a particular word is often of importance in an enquiry wherein a point of great antiquity is concerned. "I see reeds of a new species, the growth of another and a brazen soil; such as are not agitated by our winds, but by a blast that rushes from a leathern cavern beneath their roots; while a tall sturdy fellow, [alluding to the force necessary for beating down the clumsy keys of this rude instrument of new invention,] running with swift fingers over the rulers of the pipes, [i. e. the keys,] makes them, as they smoothly dance, utter concordant sounds."

However, certain musical instruments whose melody is produced by wind, had been known at Rome long before. Witness that agreeable poem of Capa, which, for its ele-

gance, has been ascribed to Virgil; where we find that the musician introduces the wind into her pipes by means of a pair of bellows, which she holds under her arms and blows. In the hydraulic organ, the water moves the air, instead of bellows. Cornelius Severus, in his "Ætina," has given an exact description of it. And, though there were two kinds of hydraulic and pneumatic instruments, the first of which played by the inspiration and action of bellows, and the other by the action of water; it is certain, nevertheless, that both of them were pneumatic, being inspired by the wind; and Heron of Alexandria, in his Pneumatics, has treated of hydraulics as belonging to pneumatics. This Heron lived in the time of Ptolemy Evergetes, king of Egypt. When Suetonius says that, Nero *organum hydraulica novi et ignoti generis circumdixit*, he did not mean that they were unknown at Rome before Nero, but that those of Nero were of a new construction. Those were the hydraulics of a new fabric, which he exhibited to the people at the public games, as Suetonius relates a little after. Heliogabalus, one of the worthy successors of Nero, like him was fond of these hydraulics; and Alexander Severus, his cousin and successor, had the same inclination. Claudian, who lived some time after, has left us this elegant description of them:

Et qui magna levi detrudens murmura tactu  
 Innumeras voces segetis moderatur ænæ;  
 Intonet erranti digito, penitusque trabali  
 Veste laborantes in carmina concitat undas.

This very construction, which is observed in the pipes of an organ, gradually decreasing in magnitude, has been represented in an epigram of Optatianus Porphyrius, who lived in the time of Constantine. This epigram, which is quoted in Pithon's collection of ancient epigrams, is composed of verses of an unequal length, successively increasing. This corresponds with those words of the old scholiast on Juvenal, Sat. viii. ver. 270. *Tunicæ Galli utuntur in sacris in modum organi utrinque decrefcentibus virgulis purpureis.*

At the time of Cassiodorus, who flourished under king Vitigas the Goth, in 514, the hydraulicum, or water-organ, blown by hand-bellows, became common; of which he gives the following description: "The organ, says he, is an instrument composed of divers pipes, formed into a kind of tower, which, by means of bellows, is made to produce a loud sound; and, in order to express agreeable melodies, there are, in the inside, movements made of wood, that are pressed down by the fingers of the player, which produce the most pleasing and brilliant tones."

On the whole, then, the antiquity of organs, or of instruments of a very similar nature, can scarcely be disputed; but nothing very particular respecting the time, place, or manner, of the invention, can possibly be determined from those incidental observations which occur in the writings of the ancients. It appears, indeed, to have been borrowed by the Latins from the Greeks, but not to have been in general use till the eighth century; and it has been affirmed, that, in France, it was not known till the time of Louis le Debonair, i. e. A. D. 815, when an Italian priest taught the use and construction of it, which he himself had learned at Constantinople. By some, however, it has been carried as far back as Charlemagne, and by others as far as Pepin. Vitruvius describes an organ in his tenth book; and St. Jerome mentions one with twelve pair of bellows, which might be heard a thousand paces, or a mile; and another, at Jerusalem, which might be heard to the Mount of Olives.

It has been a subject of debate, when the use of organs was introduced into the church. Bellarmine says, that they began to be used in the service of the church, in the time of pope Vitalian, about the year 660, as Platina relates out of the Pontifical; or, as Aimonius thinks, after the year 820, in the time of Louis the Pious. Venerable Bede, who died in 735, says nothing of the use of organs,



or other instruments, in our churches or convents, when he is very minutely describing the manner in which the psalms and hymns were sung.

Perhaps the learned Bingham is our surest guide in determining this point. He positively asserts, that there were no such things as organs in use in the ancient church; and that, though church-music was as old as the apostles, instrumental music was not so. He also says that it was the general opinion of the learned in his days, that organs were not introduced into churches till after the time of Thomas Aquinas, A. D. 1250; and for this opinion, as far as the authority of Aquinas will go, we have a positive proof in these words: "Our church does not use musical instruments, as harps and psalteries, to praise God withal, that she may not seem to Judaize." From hence it has reasonably been concluded, particularly by the learned Gregory, that they were not used in churches in his time. Mr. Wharton has also observed, that Marinus Sanutus (who flourished A. D. 1290) first introduced wind-organs into churches: from this circumstance he derived the name *Torcillus*, the name for organ in the Italian language. About this same time Durandus, in his *Rationale*, speaks of them as generally received in the church; and he, in Mr. Gregory's opinion, is the first author who takes notice of it.

These authorities are strong; and the opinions founded on them by the learned, render them still more convincing. It appears, however, from the testimony of Gervas, the monk of Canterbury, who flourished in 1200, that organs had been introduced upwards of one hundred years before that time; for, in his description of Lanfranc's church, as it was before the fire in 1174, he mentions an organ that stood over St. Michael's chapel, (*ubi organa solent esse*;) and the foundation of its loft remains to this day. We do not say that this invalidates the reasoning of the learned Bingham. Of that our readers are to judge; and, in forming their judgment, they will be determined by the credit of the testimonies which are here opposed to each other.

But, however we are disposed to determine this matter (which is in itself but of little consequence), it is certain that the use of the organ was very common in the latter ages of the church, and the propriety of it was undisputed. In the 17th century, however, during the civil wars, organs were removed from the churches in England; and so generally reprobated, that, at the restoration, there could scarcely be found either organists, organ-builders, or singers. The lawfulness of using organs in churches, has, however, been ably defended by an appeal to the use which the Jews made of instruments of music in divine service; and with much reason; for, were the use criminal in us, as was asserted by many well-meaning men of the last century, and as it is still thought by some in this, it would unquestionably have been equally unlawful for the Jews. The Christians in Aquinas's time, however, acted wisely in avoiding the use of them, if such use would have given offence to their weaker brethren. For, though they are highly ornamental, and in some churches may be productive of good effects, yet the use of them is far from being essential, and may be dispensed with. Certain it is, that in one of the "Homilies," set forth by authority of queen Elizabeth, mention is made of "filthy organs, displeasing to God," &c. &c.

Organs have never yet been used in the establishment of Scotland, since that became Presbyterian; but they are used in Holland, where that form of church-government also obtains. Bishop Horne, in a Sermon which he preached at the opening of the new organ at Canterbury, in 1784, says, that he believes some Presbyterian dissenters in England have adopted it in their places of worship.

The church-organ consists of two chief parts; the main body, called the *great organ*, and the *choir-organ*. The size of an organ is generally expressed by the length of its

largest pipe: thus they say, an organ of 8, 16, 32, feet, &c. The organ in the cathedral-church at Ulm in Germany, is 93 feet high and 28 broad: its largest pipe is 13 inches diameter, and it has 16 pair of bellows.

The great organ is commonly placed in the fore-part of the chancel, for the convenience of planting the largest pipes in the ornamental front, and that it may appear louder. The choir-organ is sometimes placed on one side within the case of the great organ, and sometimes in a separate case, at the back of the player. Hence, it is not unfrequently called the *chair organ*.

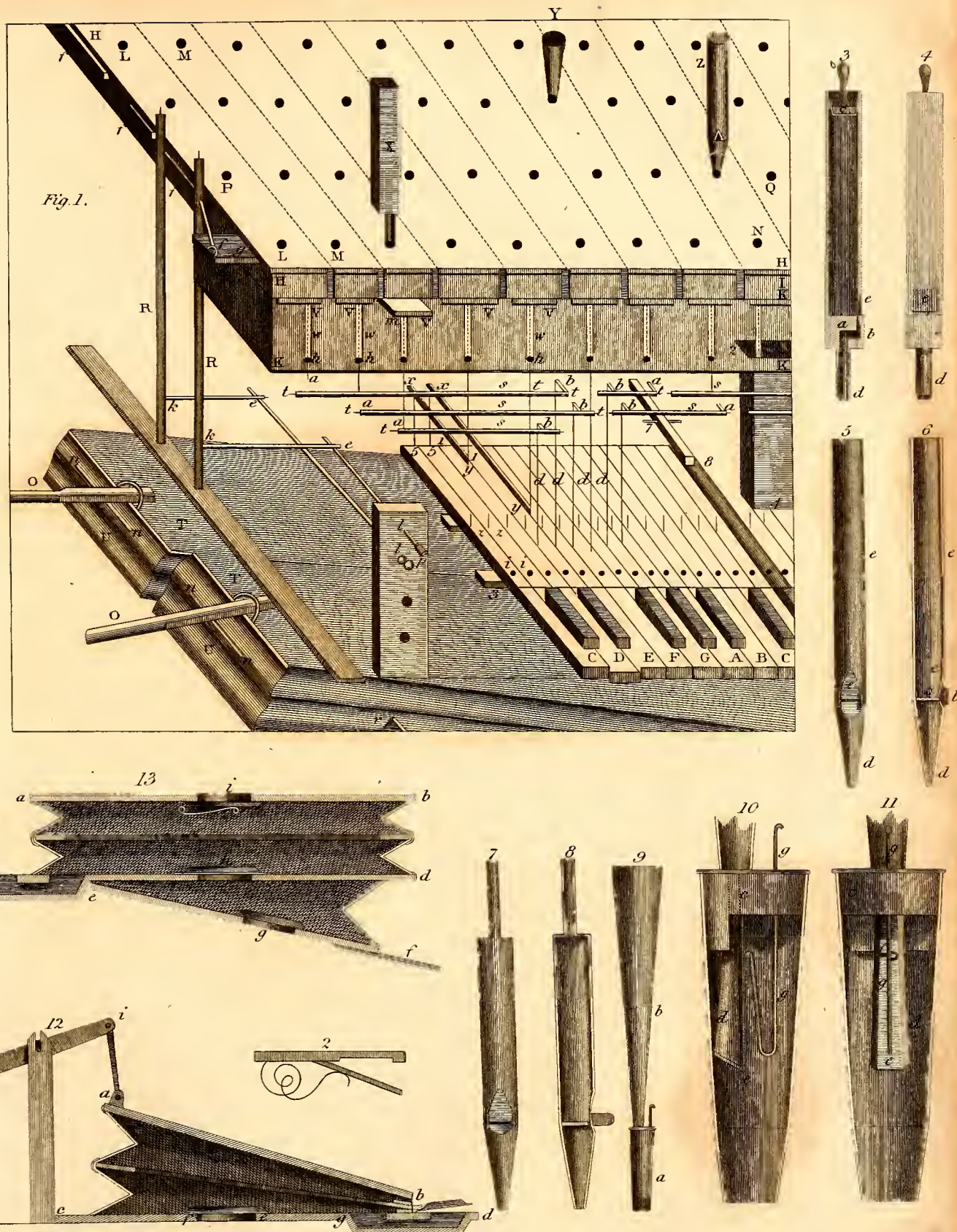
Plate XVI. The several parts of the church-organ are as follow: H I H, fig. 1. is the found-board; which is composed of two parts, the upper board or cover H H H, and the under board H I, which is much thicker than the other: each of these consists of several planks laid with their edges to each other, and joined very close together. In the under side of the lower board there are made several channels, which run in the direction L L, M M, &c. and are continued as far as there are stops in the organ, and come almost to the edge H K. These channels are covered over very close with parchment or leather, all the way, except a hole that is commonly at the fore-end next H K, upon which a valve or puff is placed. These channels are called *partitions*. When this valve or flap is shut, it keeps out the air, and admits it when open. On the upper side of the lower board, there are likewise cut several broad square channels, lying cross the former, but not so deep as to reach them: these lie in the direction L N, P Q, &c. To fit these channels, there is the same number of wooden sliders or registers, *f, f, f*, &c. running the whole length; and these may be drawn out or thrust in at pleasure. The number of these is the same as that of the stops in the organ.

I K K K is the wind-chest, which is a square box fitted close to the under side of the lower board, and made airtight, so that no air can get out but what goes through the valves along the partitions. V V are the valves or puffs which open into the wind-chest: they are all inclosed in it, and may be placed in any part of it, as occasion shall require. One of these valves, with the spring that shuts it, and the wire that opens it, is represented at fig. 2.

C, D, E, F, &c. are the keys on which the fingers are placed when the organ is played: these keys lie over the horizontal bar of wood W, in which are stuck an equal number of wire-pins, *z, z*, on which the keys are fixed; and the keys move up and down on the bar, as on a centre. There is another bar, against which the keys fall when put down, and which is here marked 3: on this also are several wires, which go through the keys, to guide them; and on this bar a lift is fastened to hinder the keys from knocking against the wood. The keys are made to communicate with the valves several ways, as we shall now describe. First, *s, s, s*, are the key-rollers, moving on the pivots, *t, t*: these rollers lie horizontally, one above another, and are of such a length as to reach from the valve to the key: *a, a, a*, are arms or levers fixed to the key-rollers: *w, w*, the valve-wires fixed to the arms *a, a*, and to the valves V, and to go through the holes *h, h*, in the bottom of the wind-chest: *b, b, b*, are likewise arms fixed to the key-rollers: *d, d, d*, the key-wires, fixed to the arms *b, b*, and to the keys C, D, E. Now, when the end of any one of the keys C, D, E, is put down, it pulls down the arm *b*, by the wire *d*, which turns about the roller *s* with the arm *a*, that pulls down the wire *w*, which opens the valve that is shut by the spring, as soon as the pressure is taken off the key. In this construction there must be a worm-spring fastened to the key, and to the bar W on the further side, to keep down the end 5 of the key.

Another method of opening the valves is thus: *x y, x y*, are slender levers, movable on the centres 1, 1; *5 x, 5 x*, are wires going from the further ends of the keys to the ends *x* of the levers; *y V, y V*, are other wires, reaching from the ends *y* of the levers, through the holes *h*, to the valves V. So that putting down the key C, D, &c. raises the





*A Church Organ, and its Parts.*

Engraved for the Engraver in the Londoners 1818.





the end 5, which thrusts up the end  $x$  of the lever, by the wire 5  $x$ ; this depresses the end  $y$  of the lever, which pulls down the wire  $y$  V, and opens the valve V.

A third way of opening the valve is this: At the end of the key  $b$ , is a lever 8, 9, moving in the centre 7. This makes, with the key, a compound lever. From the end 9, a wire goes to the valve. Now, the putting down the end 6 of the key raises the end 8, which depresses the end 9 of the lever 8, 9, pulls down the wire, and opens the valve. There is only one of these drawn in the scheme, and but a few of the others, to avoid confusion.

R, R, are the rollers, to move the sliders, by help of the arms  $cf$ ,  $cf$ , which are fixed horizontally in these rollers:  $ke$ ,  $ke$ , are also levers fixed in the rollers;  $le$ ,  $le$ , are the handles, which lie horizontally, and pass through the holes  $ll$ ; they are fastened to the lever  $ke$ , being movable about a joint at  $e$ .

Now, any handle  $lp$ , being drawn out, pulls the end  $e$  towards  $l$ , which turns about  $Rk$ , along with the arm  $cf$ ; and the end  $f$  pulls out the slider  $fg$ ; and, when  $p$  is thrust in, the arm  $cf$  likewise thrusts in the slider  $fg$ .

Upon the several rows of holes which appear on the top of the upper board, there are set up an equal number of rows of pipes. The pipes of an organ are of four kinds, stopped, half-stopped (with a funnel or chimney at the top), open, and reed, pipes. Various materials have been used for their construction; but the most common practice is to make the stopped pipes of wood, and the open and reed pipes of a metal composed of tin and lead.

Figs. 3 and 4. represent the front and section of a stopped wooden pipe. In fig. 4.  $a$  is a square block of wood, corresponding with the interior diameter of the pipe, upon which the back and two sides are glued. In this a channel is cut, in the direction of the shaded line, for the passage of the wind, which, entering at the foot  $d$ , passes through the channel in the block, and the cavity of the lip or top piece  $b$ , and strikes upon the sharp edge of the front at  $e$ , the mouth:  $c$  is a movable wooden stoppion, covered with leather to make it air-tight. When this is drawn outwards, the tone of the pipe is flattened, and, when pushed inwards, sharpened. Figs. 5 and 6. represent the front and section of an open metal pipe. Fig. 6.  $d$  is the foot, which is a hollow cone, and is separated from the cylindrical body of the pipe  $e$ , by a partition called the *langue*, or tongue,  $a$ , which answers the purpose of the block in the wooden pipe. The wind passes through a narrow aperture at  $b$ , and strikes upon the upper side of the mouth at  $e$ . A small ear is usually affixed on each side of the mouth, for the purposes of enriching the tone, and to tune such pipes as stand in the ornamental front of the organ. Metal open pipes are tuned by opening the tops with a brass cone, to sharpen them; and by closing them with the inside of the cone, to flatten them. Figs. 7 and 8. are the front and section of an half-stopped pipe, or pipe *à la cheminée*. These pipes are tuned by opening or closing the ears, which are made very large for this purpose. Fig. 9. is the exterior of a reed-pipe, consisting of two parts; the foot,  $a$ , and the tube or body of the pipe,  $b$ . The tube is soldered to a block of metal,  $c$ , (figs. 10 and 11.) which exactly fits into the upper end of the foot. In this is fixed a hollow demi-cylinder,  $d$ , of brass, called the reed, stopped at the lower extremity, and communicating at the other with the body of the pipe. The open side of the reed (the edges of which are filed perfectly flat and parallel) is covered with a thin plate of hard brass, called the tongue; one end of which is kept in its position by a small wooden wedge  $f$ , and the other left at liberty to vibrate with the action of the wind. The degree of acuteness or gravity of a reed-pipe, depends jointly on the length of the tongue and that of the pipe, measured from the extremity of the reed to the extremity of the tube. It is, therefore, necessary to have some method of altering the length of the reed,

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in order to tune the pipe. This is effected by pulling up, or pushing down, the wire-spring  $g$ ; which, pressing the tongue closely against the reed, shortens or lengthens the vibrating portion of it. The degree of gravity, or acuteness, of any pipe, depends upon the length; measured, in an open pipe, from the edge of the mouth to the extremity of the tube; and, in a stopped pipe, from the edge of the mouth to the interior surface of the stoppion. A stopped pipe is half the length of an open pipe of the same pitch.

We now return to fig. 1. where  $X$  represents a stopped-pipe of wood,  $Z$  a flute-pipe of metal,  $Y$  a trumpet-pipe of metal, standing in their places in the rows we have mentioned. The pipes, to prevent them from falling, pass through holes made in boards placed upon the upper board. The pipes are made to communicate with the wind-chest in the following manner: There are holes bored that go through the upper and lower boards, and through the slider (when it is drawn out), into the partition below; so that any pipes placed upon those holes will then communicate with the partition, which, by its valve, communicates with the wind-chest. But, when the slider is thrust in, its holes do not answer to those in the upper and lower boards; therefore, the communication is stopped, so that no wind can get to the pipe.

To every large organ there must be at least two pair of bellows, which are marked in fig. 1. by  $TU$ ,  $TU$ .  $O$ ,  $O$ , are the handles, moving upon the axis  $nn$ ,  $nn$ . Each of these bellows consists of two boards, the lowest of which is immovable; and in this there is a valve  $r$ , opening inwards, and a tube leading to it, called the *conveying tube*. There is also a hole in this under board, from which a tube leads to the port-vent, which is a square tube marked 4, rising upward, and inserted into the under side of the wind-chest at 2. In the tube leading to the port-vent, there is a valve that opens towards the port-vent, and suffers the air to go up the port-vent, but not to return. Now the handle  $O$ , being pulled down, raises the upper board  $T$ , and the air enters through the valve  $r$ ; and, when the handle is let go, the weight of the upper board, which carries three or four pounds to every square foot, continually descending, drives the air through the port-vent to the found-board; and, as the bellows work alternately, one pair is constantly descending, which occasions a continual blast through the port-vent.

The bellows are shown separately at figs. 12 and 13. Single-bellows, for a chamber-organ, consist of two oblong boards,  $ab$ ,  $cd$ , fig. 12. connected at  $b$  by a joint of leather or web, and at the other three sides by thin folds of wood joined together with leather. The lower board is fixed, the upper movable. In the lower board, at  $ef$ , is an aperture covered with a valve (called by the organ-builders a pallet) opening inwards. At  $g$  is another aperture, covered with a hollow box  $g$ ,  $d$ , communicating with the wind-trunk; upon the mouth of which is another pallet opening outwards. When the upper board,  $ab$ , is raised by pressing down the handle of the lever  $hi$ , the air enters the bellows at the aperture  $ef$ ; and, upon letting go the lever, is forced into the wind-trunk at  $d$ , by the pressure of weights placed upon the upper board. The pallet at  $d$  prevents the return of the wind from the wind-trunk, when the upper board is raised. Double bellows are made with three boards;  $ab$ , (fig. 13.) the riser;  $cd$ , the middle; and  $ef$ , the feeder boards. At  $g$ , in the feeder, is an aperture, and pallet to receive the air; and at  $h$ , in the middle board, is the pallet of communication; and at  $i$ , in the riser, the waste pallet, which is contrived to open, when the bellows are sufficiently full. The riser empties itself into the wind-trunk at  $c$ . In old bellows of this kind, the riser is connected with the middle board, in a manner similar to the single bellows; but it is now usual to join them with folds of an equal breadth in all parts, so that the upper board, in rising, is always parallel to the middle board. These are called *horizontal bellows*, in contradistinction to those which rise diagonally. Their

action is very superior to those of the old form. They afford a greater quantity of wind, in proportion to the case-room they occupy; the pressure is more equal; and they are not liable to jerk or quiver. Though lately brought into common use, they are by no means a modern invention, as Père Merfenne describes them under the name of bellows *à la lanterne*.

All the internal structure of the organ is concealed from sight by the front of the instrument, which stands upon the part between the numbers 3 and 6 (fig. 1.) In every organ, the number of partitions L L, M M, &c. that are in the sound-board (fig. 1.) that of the valves V V, that of the rollers s s, or of the levers x y or 8 9 and their wires, and that of the keys A B C, &c. must be always equal. The keys are placed between G G, but the scheme could not contain them all. There are also as many handles l, l, &c. rollers R R, &c. sliders f, f, &c. as there are stops upon the organ; and it must be observed, that between the sliders f, f, &c. there are as many sliders on the right hand, and the same number of handles and rollers, and other rows of pipes placed between L N, P Q, which could not be expressed in the figure. The least pipes and partitions are placed toward the middle of the organ, and the greatest on the outside. The stops of an organ have various denominations, according to the sounds they are to produce; some of which are diapason, principal, fifteenth, twelfth, tierce, cornet, trumpet, French horn, vox humana, flute, bassoon, cremona, &c. The foreign organs, especially those of Germany, have many more: particularly that in the abbey-church of Weingarten, a town in the Upper Palatinate, which has 66 stops, and contains no fewer than 6666 pipes. The organ at Haerlem is said to have 60 stops, many of them but little known to the English workmen, and distinguished by names that express the sounds which they produce.

When this magnificent instrument is played, the handle O of the bellows is first put down, which raises the upper board T, and gives room for the air to enter by the valve r. Then the other handle O is put down: in the mean time the board T, belonging to the first handle, descending, and shutting the valve r, drives the air through the other valve, up the port-vent, and into the wind-chest. Then drawing out any handle, as that of the flute-stop p l, which draws out the slider f g, all the pipes in the set L N are ready to play, as soon as the keys C, D, E, &c. are put down; therefore, if the key D be put down, it opens the corresponding valve m V, through which the air enters into the pipe X, and makes it sound. In the same manner any other pipe in the set L N, will sound when its key is put down; but no pipe, in any other set, will sound till the slider be drawn out by its corresponding handle.

The number of keys, or compass of the organ, in the time of father Schmidt, was commonly confined to four octaves; from double C in the bass, to C in alt. To these, two notes, G G and A A, were sometimes added to the lowest octave. An organ of this compass is said to have *short octaves*. When the keys are extended to G G in regular succession, the organ is said to have *long compass*. The modern builders have extended the keys upwards to F in altissimo.

Besides the *manuals*, or keys for the hand, there are, in some large church-organs, *pedals*, or keys played with the feet; said to be the invention of Bernard, a German, about the year 1400. These command certain pipes, which, to increase the harmony, are tuned an octave below the diapason. It is much to be lamented, that the English builders have not followed some certain and invariable rule for the position of their pedals, as they do for their keys. Scarcely two organs in the kingdom have their pedals alike, either with respect to number or position; so that every performer, who comes to an organ with which he is not previously acquainted (be he ever so skilful in the use of pedals), has the whole of his business to learn again. The disposition of the pedals of the fine organ in St. Paul's cathedral, might serve as a model for

all other English organs. Each octave of the pedal occupies the space of two octaves of the finger-keys; and the C's are placed under each other.

Among the modern improvements of the organ, the most remarkable are the swell and the tremblant. The swell is said to be an English invention; and Dr. Burney, in his Tour through Germany, says that he found only one organ in which a swell had been attempted, and that in a very imperfect manner. The swell has its pipes inclosed in a stout wooden box, with a sliding door; which, being gradually opened by the pressure of the performer's foot, the sound is increased, and is diminished by a contrary motion. The swell organ is commonly placed in the upper part of the case, either over the great organ, or over the choir-organ. The tremblant is a contrivance by means of a valve in the port-vent, or passage from the wind-chest, to check the wind, and admit it only by starts; so that the notes seem to stammer, and the whole instrument to sob, in a very singular manner. There is a tremblant in the organ at the German chapel in the Savoy.

Those who wish to be further informed in the history and practice of organ-building, are referred to L'Harmonie Universelle, folio, Paris, 1636; Harmonicorum Libri Duodecimi, folio, Paris, 1648; Fauteur d'Orgues, Paris, 1766; and Mr. Mason's Essays on English Church Music.

The organs in our churches, that have been well preserved, of father Schmidt's make, such as St. Paul's, the Temple, St. Mary's, Oxford, Trinity-college, Cambridge, &c. are far superior in tone to any of more modern construction; but the mechanism has been improved during the last century, by Byfield, Snetzler, Green, Gray, &c. The touch is lighter, the compass extended, and the reed-work admirable. The dulciana-stop, brought hither by Snetzler, is a tall, delicate, narrow, pipe, of an exquisite sweet tone, without a reed; on which account it stands in tune equally well with the open diapason. Though the best keyed-instruments in England have been made by Germans, they work here better than in their own country in size and number of stops: they greatly surpass us in the size of their organs, but the mechanism is infinitely inferior; which is accounted for by the workmanship being better paid here than in the German dominions, where labour is cheap.

The long keys of our old church-organs were made of box or ebony, and the short, or flats and sharps, of ivory. But at present, the long keys, or natural notes, like those in harpichords and piano-fortes, are of ivory, and the flats and sharps of ebony, or dyed pear-tree wood.

An organ, when complete for cathedrals, is of three-fold construction, and furnished with three sets of keys; one for what is called the great organ, and which is the middle set, a second (or lower set) for the choir-organ, and a third (or upper set) for the swell. In the great organ, the principal stops are: the two diapasons, the principal, the twelfth, the fifteenth, the sesquialtera, the mixture or furniture, the trumpet, the clarion, and the cornet. The choir-organ usually contains the stop diapason, the dulciana, the principal, the flute, the bassoon, and the vox humana. The swell comprises the two diapasons, the principal, the hautboy, trumpet, and cornet.

In attempting to describe the requisites of a good organ, we shall begin with the bellows; which, besides being of a size fully adequate to supply the chorus, should at all times give an equal weight of wind. This may be known, by holding down two notes of the diapason, or any other stop, when the bellows are nearly full, and observing whether they continue in the same relative state of tune, until the bellows are nearly empty. If they do, the wind is equal; without which, no organ can ever be in tune: also, when carefully blown, no difference should be heard from the action of blowing. In like manner, a single note of the diapason should continue unaltered in its pitch, and smooth in its tone, while the other stops are added in succession, until the whole chorus be drawn. This proves that the wind meets with no impediment in



its course to the pipes : a requisite of no less importance than the former.

The draw-stops should move with sufficient ease and smoothness ; and should stop so decidedly, as to leave no doubt of their being completely drawn, or shut. The touch of the keys should be free and elastic, and exactly the same pressure should be requisite to put down every key throughout the scale. No better proof can be given of a good touch, than that a turned shake can be executed with equal facility in every part of the scale, except perhaps in the lowest octave, where it is not to be expected or desired. If all these things act without noise, the mechanical parts of the organ may be considered good, and in order.

The goodness of the pipes is not so easily described, because much depends upon the quality of the tone, of which little idea can be given in words. A fine quality and great strength can hardly be expected from the same pipe : it therefore depends somewhat on choice which to prefer ; though it does not follow that all soft-toned pipes are of a fine quality. But, be the quality what it may, it should be uniform from the top to the bottom : a requisite which cannot be too strongly insisted on in all instruments, so as to give the idea of all the notes coming from the same pipe or string.

It is indispensable to an organ, that it have a good stopped diapason, as that stop is the foundation of the organ, and is never shut, except when the dulciana or flute are used as solo-stops. It is of great importance that it be sufficiently full and bold in the bass, particularly in those chamber-organs which have an open diapason ; as that stop is seldom extended lower than G-gamut. And in large church-organs, where the open diapason goes through the scale, the lower notes are feeble, if not supported by the stopped diapason ; and it may be observed, that no stop should be loudest at the top. Of the open diapason, little more need be said, than that it should be full, smooth, and articulate. In small organs it is entirely dispensed with ; and in those which are larger, it is in the treble only, or more or less extended into the bass, according to the size of the organ, or choice of the builder ; and it may be proper to observe, it is better that the lowest pipes should not be so loud as to make the break very perceptible. In large church-organs there are frequently two open diapasons through ; and nothing can be a greater recommendation to an organ than its having good diapasons. What has been already said will apply to all other stops generally, when taken singly ; but their relative strength is of great importance to the goodness of the chorus. As a single stop should not be loudest at the top, so the chorus-stops should not predominate over the diapasons ; a fault very general in the old organs, arising from the bad taste of the times in which they were made. The chorus should be rich, brilliant, and articulate ; and the twelfth and tierce, and their octaves, should not be heard, except when listened for. The trumpet-stop, when good, adds greatly to the majesty, as well as to the strength of the chorus ; and its octave, the clarion, increases its brilliancy.

The goodness of these, and all other reed-stops, besides the requisites already mentioned, depends upon their speaking readily and quickly ; and being free from the nasal tone, such as is produced by bad players on the clarionet or hautboy. And it had been well if the trumpet had never been used as any other than a chorus-stop ; for its use, as an imitation of a real trumpet, has given rise to the introduction of a variety of imitation-stops ; most of them a disgrace to the noble instrument in which they are suffered to intrude ; and its consequence, a trifling and vitiated style of performance equally disgraceful to the taste of this country, where only it is cultivated.

We have mentioned (p. 368.) the scarcity of organ-builders at the time of the restoration. Harris, sen. and Renatus Harris, his son, two eminent organ-builders, called hither from France, soon after the restoration, to

supply our churches with instruments, (which, during the time of the republic, had been injured, banished, or destroyed,) were excellent workmen, only inferior to father Schmidt, to whom Renatus, after the death of his father, in 1672, became a formidable rival. The contention between these eminent artists, at the time of erecting the admirable organ which still stands in the Temple-church, was carried on with such spirit, not to say violence, as perhaps never happened before or since on a similar occasion.

About the latter end of the reign of Charles II. the master of the Temple and the benchers, being determined to have as complete an organ erected in their church as possible, received proposals from both these eminent artists, backed by the recommendation of such an equal number of powerful friends and celebrated organists, that they were unable to determine among themselves which to employ. They therefore told the candidates, if each of them would erect an organ in different parts of the church, they would retain that which, in the greatest number of excellencies, should be allowed to deserve the preference. Schmidt and Harris agreeing to this proposal, in about eight or nine months, each had, with the utmost exertion of his abilities, an instrument ready for trial. Dr. Tudway living at the time, the intimate acquaintance of both, says that Dr. Blow and Purcell, then in their prime, performed on father Schmidt's organ, on appointed days, and displayed its excellence ; and, till the other was heard, every one believed that this must be chosen. Harris employed M. Lullie, organist to queen Catharine, a very eminent master, to touch his organ, which brought it into favour ; and thus they continued vying with each other for near a twelvemonth. At length, Harris challenged father Schmidt to make additional reed-stops in a given time ; these were the vox-humana, cremorne, the double courtel, or double bassoon, and some others. These stops, then newly-invented, or at least new to English ears, gave great delight to the crowds who attended the trials ; and the imitations were so exact and pleasing on both sides, that it was difficult to determine who had best succeeded. At length, the decision was left to lord chief-justice Jefferies, afterwards king James II's pliant chancellor, who was of that society, and he terminated the controversy in favour of Schmidt ; so that Harris's organ was taken away without loss of reputation, having so long pleased and puzzled better judges than Jefferies. The Hon. Roger North, who was in London at the time of the contention at the Temple-church, says, in his *Memoirs of Music*, that the competition between father Schmidt and Harris, the two best artists in Europe, was carried on with such violence by the friends of both, that they "were just not ruined." Indeed old Roseingrave assured Dr. Burney, that the partisans for each candidate, in the fury of their zeal, proceeded to the most mischievous and unwarrantable acts of hostilities ; and that, in the night preceding the last trial of the reed-stops, the friends of Harris cut the bellows of Schmidt's organ in such a manner, that, when the time came for playing upon it, no wind could be conveyed into the wind-cheft. Harris's organ, after its rejection at the Temple, was part of it erected at St. Andrew's, Holborn, and part in the cathedral of Christ-church, Dublin.

Besides this complete organ, there are other organs of smaller sizes and more limited powers, adapted to church, chapel, and chamber, use. There is also the *barrel-organ*, which has the parts of other organs, with the addition of a cylinder, or barrel, revolving on pivots : on the circumference of this, by means of wires, pins, and staples, are set the tunes it is intended to perform. These pins and staples, by the revolution of the barrel, act upon the keys, and give admission to the wind, from the bellows to the pipes. The barrel-organ is frequently made portable, and so contrived, that the same action of the hand which turns the barrel supplies the wind, by giving motion to the bellows.



Of all musical instruments, the barrel-organ is the most easy of performance, as it merely requires a regular motion given to it by a handle. On this account, it is an instrument of very general use; and the recent improvements of some English artists, have rendered the barrel capable of producing an effect equal to the fingers of the first-rate performers. Barrels are now very generally added to chamber-organs, operating on the same pipes as the finger-keys, though by a different set of keys; so that either barrel or finger-keys may be used independently of each other. Many barrel-organs are constructed on an extremely small scale, motion being given to them by clock-work. The whole instrument is frequently concealed in some piece of furniture; and the clock, being previously wound up, is put in motion at pleasure, by discharging a trigger, producing a very agreeable effect to those unacquainted with the concealment.

A most powerful and grand instrument of this kind, called the Apollonicon, is now exhibiting at Flight and Robson's, St. Martin's-lane, London. This instrument has attracted, in a considerable degree, the curiosity and attention of the musical world. As a high result of mechanical skill, and as a mode of producing musical sounds, it deserves high ecomium. It is essentially an organ, on a very large scale, and of an extensive compass, comprising every shade and gradation of sound from great power to extreme softness and sweetness; and possesses moreover the capacity of being played on by five performers at the same time. To the notion, however, which appears to have obtained currency, that it is equal in effect to the variety and richness of a full orchestra, to the union and contrast of voices and instruments, we cannot lend our sanction: from no one instrument, however perfect and complicated, will such a result ever be obtained; and this is not altogether free from the defects which are inherent in instruments of this character, the organ species, of monotony, the want of the *staccato*, and of the perfect and gradual *crescendo* and *diminuendo*. It is but justice, at the same time, to observe, that in this latter respect it has improved on, and exceeded the powers of, organs in general. On the whole we may venture to say, that the Apollonicon, in its present mode of exhibition, is deserving a visit; and will rank the higher, if its admirers do not injudiciously extol it for qualities which it does not possess.

The *hydraulic organ*, already mentioned, is a machine that plays by water instead of wind. Of these there are several in Italy, in the grottoes of vineyards. Ctesibes of Alexandria, who lived in the time of Ptolemy Evergetes, is said to have invented organs that played by compressing the air with water, as is still practised. Archimedes and Vitruvius have left us descriptions of the hydraulic organ. In the cabinet of queen Christina is a beautiful and large medallion of Valentinian, on the reverse whereof is seen one of these hydraulic organs, with two men, one on the right, the other on the left, seeming to pump the water which plays it, and to listen to its sound. It has only eight pipes, placed on a round pedestal. The inscription is *PLACEA SPETRI*, if it be not wrong copied, which we suspect to be the case.

The *SPINET*.—The spinet is a stringed instrument, but played with keys like the organ. The name is derived from *spina*, a thorn, or quill, the tone being produced by a crow-quill inserted in the tongue of a little machine called a jack. The instrument consists of a chest, or belly, made of the most porous and resinous wood to be found, and a table of fir fastened on rods, called the *sound-board*, which bears on the sides: on the table are raised two little prominences or bridges, in which are fixed as many pins as there are strings on the instrument.

The keys, when pressed down at the end by the finger, on the principle of the lever, make the other end throw up jacks, which strike the strings, and cause the sound by means of the quills with which they are armed. The thirty thickest strings are of brass; the others, for the

more delicate tones, are of steel or iron wire, fastened at one end by hooks, and at the other on pins, by which they receive their tension over the bridges already mentioned.

The figure of the spinet is like that of a horizontal harp, and the harp an inverted spinet. It is tuned in the same manner as other keyed instruments, by 5ths and 8ths, with or without bearings, as the tuner or the owner of the instrument shall please. There have been spinets and harpsichords made for curious people with some or all the keys split or cut in two, and furnishing a different tone for F\* and Gb, D\* and Eb, &c. to perfect some of the most offensive keys in common tuning. Zarlino had an instrument of this kind made at Venice, and it was afterwards sent to England; but the mechanism and tone were so bad, that no tuning could render its sounds agreeable: There are quarter-notes, as they are called, in the Temple organ, to three of the five short keys; but, except in psalmody, or very slow movements, Stanley never ventured to touch them. The spinet has but a single string to each note. We believe that very few spinets have been made since the middle of the last century.

The *virginal* was a keyed instrument of one string, jack, and quill, to each note, like a spinet; but in shape resembling the present small piano-forte. It has been imagined to have been invented in England during the reign of queen Elizabeth, and to have been thus denominated in honour of that virgin princess; but Dr. Burney has brought a proof of its use in this kingdom before she was queen; and a drawing and description of it appeared in Lucinius's *Mufurgia*, before she was born. Dr. Johnson imagines that this instrument had its name from being chiefly used by young ladies.

A virginal which had belonged to queen Elizabeth is still extant, and in good preservation. It was purchased at lord Spencer Chichester's sale at Fisherwick, about fourteen years ago, by Mr. Jonah Child, a painter, at Dudley in Worcestershire. The case is of cedar, covered with crimson Genoa velvet, upon which are three ancient gilt locks, finely engraved: the inside of the case is lined with strong yellow tabby silk. The whole is in a high state of preservation, light and portable, not exceeding twenty-four pounds in weight; being five feet long, sixteen inches wide, and seven inches deep. The front is covered entirely with gold; having a border round the inside two inches and a half broad. There are fifty keys, with jacks and quills; thirty of them ebony, tipped with gold; and the semitone keys (twenty in number) are inlaid with silver, ivory, and different kinds of wood, each key consisting of about two hundred and fifty pieces. The royal arms of Elizabeth, at one end, are most exquisitely emblazoned: at the other end a dove, rising Luna, crowned, holding in its right foot a sceptre, and standing upon an oak-tree, couped, and eradicated. It is impossible to give an adequate idea of the ornaments and workmanship of the whole. The painting is done upon gold, with carmine, lake, and fine ultramarine, and the ornaments are minutely engraven upon the gold, which give it a most beautiful appearance.

Speaking of this singularly-curious instrument, the late Mr. Shaw, in his *History of Staffordshire*, vol. i. p. 369, article *Fisherwick*, says, "The music-rooms, which are elegantly fitted up, contain an excellent collection of instruments by the first makers: but the greatest curiosity, in this line, is a virginal; which his lordship purchased some years since in London, and which has lain some time in obscurity. It is covered with crimson velvet, and richly decorated in front with japan and gilt ornaments, among which are the arms and supporters of queen Elizabeth at one end, and at the other, a bird, crowned, holding in its right paw a sceptre. It is in shape and size much like a spinet, but opens on the opposite side, and then resembles a common piano-forte. The beauty and elegance of the ornaments, together with the above arms and badge, leave little room to doubt that it was, what tradition



tradition states it to have been, an instrument once belonging to that great queen."

Dr. Burney says, that Elizabeth, as well as the rest of Henry the Eighth's children, and indeed all the princesses of Europe at that time, had been taught music early in life; for Camden, in giving an account of her studies, says, "that she understood well the Latin, French, and Italian, tongues; and was indifferently well seen in the Greek. Neither did she neglect music, so far as might become a princess; being able to sing, and play upon the lute, prettily and sweetly." There is reason to conclude that she continued to amuse herself with music many years after she ascended the throne. Sir James Melvil gives an account of a curious conversation which he had with this princess, to whom he was sent on an embassy, by Mary queen of Scots, in 1564. After her majesty had asked how his queen dressed? what was the colour of her hair? whether that or hers was best? which of the two was fairest? and which of them was highest in stature? then she asked him, what kind of exercise she used? "I answered," says Melvil, "that, when I received my dispatch, the queen was lately come from the Highland-hunting; that, when her more serious affairs permitted, she was taken up with reading of histories; that sometimes she recreated herself in playing upon the lute and virginal." She asked if she played well? I said, "Reasonably for a queen."—"The same day, after dinner, my lord of Hunsden drew me up to a quiet gallery, that I might hear some musick (but said he durst not avow it), where I might hear the queen play upon the virginal. After I had harkened awhile, I took by the tapestry that hung before the door of the chamber, and, seeing her back was towards the door, I entered within the chamber, and stood a pretty space; but she left off immediately, so soon as she turned about and saw me; appearing to be surprised to see me; and came forward, seeming to strike me with her hand, alleging that she used not to play before men; but when she was solitary, to mourn melancholy. She asked how I came there? I answered, 'As I was walking with my lord Hunsden, as we passed by the chamber-door, I heard such a melody that ravished me; whereby I was drawn in, ere I knew how; excusing my fault of homeliness, as being brought up in the court of France, where such freedom was allowed; declaring myself willing to endure what kind of punishment her majesty should be pleased to inflict upon me, for so great an offence.' Then she fate down low upon a cushion, and I upon my knees by her; but, with her own hands, she gave me a cushion to lay under my knees; which at first I refused, but she compelled me to take it. She enquired whether my queen or she played best? In that I found myself obliged to give her the praise." *Gent. Mag.* 1815.

The oldest book of lessons that we know of as composed expressly for the virginal, is a thin folio, engraved on copper, and published in the reign of king James I. under the following title: "*Parthenia*, or the Maidenhead of the first Musicke that ever was printed for the Virginalls. Composed by three famous masters: William Byrd, Dr. John Bull, and Orlando Gibbons, Gentlemen of his Majesties most illustrious Chappel." Bird being here called "Gentleman of his Majesties Chappel," seems to imply, that he was still living when it was published. King James died in 1525, and Bird in 1523. The three first movements in this collection, consisting of a *Preludium*; *Pavana*, Sir William Peder; and a *Galiardo*; are in G minor, and may be called a *Suite* of Lessons. The fourth and fifth movements, *Preludium*; and *Galiardo*, Mrs. Marye Brownlo, in C; and the sixth, seventh, and eighth, *Pavana*, the Earle of Salisbury; *Galiardo primo*; and *Galiardo secundo*, Mrs. Marye Brownlo, in A minor; constitute what may likewise be regarded as two other *Suites de Pieces*, or *Sets of Lessons*.

The *clavichord*, or *manichord*, is a keyed instrument somewhat of the nature of the spinet or virginal, but of an oblong form. It is not known in England, but is still

much used in Germany. Its form is that of a small piano-forte: it has no quills, jacks, or hammers. The strings are all muffled with slips of red cloth, and the tone is produced by little brass wedges, placed at the ends of the keys, which, when put down, press against the middle of the strings, acting as a bridge to each. When this instrument is touched by a good master, it is capable of great expression, though of a melancholy kind, something like the effect of the old close-shake on the violin. It is sometimes called the *dumb spinet*. The antiquity of this keyed instrument in Germany is very great among modern musical inventions; as there is a description and a representation of it cut in wood, in the Latin *Musurgia* of Ottomarus Luscinius, printed at Straßburg in 1536. But we find mention made of it, as a common instrument, in England, under the name of *clarichord*, by Taverner, still more early. The scale of these three instruments is the same as that of the old organs.

The **HARPSICHORD**.—As the harp was derived from the cithara, so was the harpsichord from the harp, being indeed a horizontal harp, except that it is strung entirely with wire. Its tone is produced by jacks quilled with crow or raven quills. A *single harpsichord* of two unisons and one set of keys, was, in effect, a double spinet or virginal. But a *double harpsichord* used to have two sets of keys, and three strings, two unisons and an octave, to each note. Merlin, we believe, was the first who changed the octave-stop to a third unison, about the year 1770, which rendered the instrument equally powerful, and less subject to go out of tune; the octave-stop being so much affected by the least change in the temperature of the air, that it almost instantly discovered when there was a change in the wind. Besides arming the tongues of the jacks with crow or raven quills, several other means were tried by which to produce a softer tone, and to be more durable; as the quilling a harpsichord with three stops was nearly a day's work: leather, ivory, and other elastic substances, were tried; but what they gained in sweetness was lost in spirit. The best harpsichords of the eighteenth century were made by Ruckers of Antwerp, and his family; Geronimo of Florence, Couchette, Tabel, and Kirkman and Shudi, Tabel's foremen.

The harpsichord is now so entirely out of use, that one of Kirkman's double-keyed instruments may be had for six or eight guineas. We therefore proceed to speak of the *hammer-harpsichord*, or

**PIANO-FORTE**.—About the beginning of the last century, hammer-harpsichords were invented at Florence, of which there is a description in the *Giornale d'Italia*, 1711. The invention made but a slow progress. The first that was brought to England was made by an English monk at Rome, father Wood, for an English friend, (the late Samuel Crisp, esq. of Cheshington, author of *Virginia*, a tragedy,) a man of learning, and of exquisite taste in all the fine arts. The tone of this instrument was so superior to that produced by quills, with the additional power of producing all the shades of *piano* and *forte* by the finger, that, though the touch and mechanism were so imperfect that nothing quick could be executed upon it, yet the Dead March in Saul, and other solemn and pathetic strains, when executed with taste and feeling by a master a little accustomed to the touch, excited equal wonder and delight in the hearers. Fulk Greville, esq. purchased this instrument of Mr. Crisp for 100 guineas, and it remained *unique* in this country for several years, till Plenius made a piano-forte in imitation of that of Mr. Greville. Of this instrument the touch was better; but the tone very much inferior. Backers, a harpsichord-maker of the second rank, constructed several piano-fortes, and improved the mechanism in some particulars; but the tone, with all the delicacy of Schroeter's touch, lost the spirit of the harpsichord, and gained nothing in sweetness.

After the arrival of John Chr. Bach in this country, and the establishment of his concert, in conjunction with Abel, all the harpsichord-makers tried their mechanical



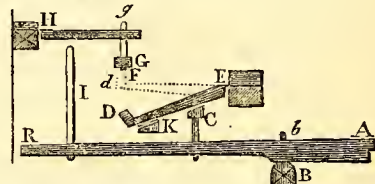
powers at piano-fortes; but the first attempts were always on the large size, till, about the year 1766, Zumpé, a German, who had long worked under Shudi, constructed small piano-fortes of the shape and size of the virginal, of which the tone was very sweet, and the touch, with a little use, equal to any degree of rapidity. These, from their low price, and the convenience of their form, as well as power of expression, suddenly grew into such favour, that there was scarcely a house in the kingdom, where a keyed instrument had ever had admission, but was supplied with one of Zumpé's piano-fortes, for which there was nearly as great a call in France as in England. In short, he could not make them fast enough to gratify the craving of the public. Pohlman, whose instruments were very inferior in tone, fabricated an almost infinite number for such as Zumpé was unable to supply. Large piano-fortes afterwards receiving great improvement in the mechanism by Merlin, and in the tone by Broadwood and Stoddard, the harsh scratching of the quills of a harpsichord can now no longer be borne.

We are informed by a correspondent in the Monthly Magazine for Dec. 1810, that a very ingenious musical-instrument maker, a native of Saxony, claims the invention for a member of the academy of Dresden. In corroboration of which, he has furnished an extract from a recent German publication, entitled *Musikalisches Lexikon, von H. C. Koch*. The following is a translation: "The piano-forte was invented by J. C. Schröder, of Dresden in Saxony, in the year 1717. He had a model made of this invention, and presented it to the court of Dresden for inspection. The hammers recoiled, and were covered with leather. Some time after, Mr. G. Silvermann, a musical-instrument maker, began to manufacture some, and succeeded in bringing them to a tolerable degree of perfection. It has been questioned, however, whether Schröder, or B. Castofali, an instrument-maker of Florence, had the first idea of it; but the most authentic accounts establish indisputably the claim of Schröder to this ingenious invention." For a particular description of its mechanism, see Mizler's *Musikalische Bibliothek*, vol. iii. "The *fortbien*, called here the square piano-forte, was invented by Freiderici, an organ-builder, of Gera in Saxony, about the year 1758."

These extracts would seem to establish the fact, that we owe the invention of the piano-forte to Germany. Mr. Capel Lofft, however, is of a different opinion; and gives the invention, as well as the introduction of it into this country, to Zumpé. "The introduction of this elegant and expressive instrument, which seems to me, and to many, to have so much improved on the harpsichord, took place in this country probably, and almost certainly, in 1766, and was completed in 1768. Its improvement in two years, seems to make it probable that it was even invented here. And this appears the more likely, as I find no indication that Rousseau was acquainted with it. If he had, I presume he would have been too greatly interested in it to have passed it in silence. During his stay in England, he spent so much of his time at a distance from the metropolis, and I believe in society not particularly musical, that it was very likely that he should not hear of it. But, if it had been introduced first in Germany, and before 1766, it is almost impossible that Rousseau, who died July 4, 1778, should not have heard of it. It could hardly have failed to have been known in Paris, through France, and even in Switzerland, many years before his death, if it had been so long previously to that event in use in Germany."

By whomsoever invented, however, the piano-forte was so much improved by our celebrated poet Mason, that, added to the probability of its having been invented here, it has been called a "national instrument." Mr. Mason had observed, that the piano-fortes which had been made here by Zumpé and other Germans, were all constructed on one principle, and required a particular touch of the finger, which was of difficult acquisition,

and which spoiled it for harpsichord-practice; as they were also deficient in delicacy and justness, and as the performer was by no means certain of producing the very strength of sound intended, Mr. Mason removed all those imperfections, by detaching the mallet entirely from the key, and giving them only a momentary connection. It is by this improvement that the *English piano-forte* is distinguished from all others. Mr. Mason's general principle may be fully understood by the following description. In the annexed figure, the parts are represented in their



state of inaction. The key A B K turns, as usual, on the round edge of the bar B; and a pin *b*, driven into the bar, keeps it in its place. The dot F represents a section of the string. E D is the mallet, having a hinge of vellum, by which it is attached to the upper surface of the bar E. At the other end is the head D, of wood, covered with some folds of prepared leather. The mallet lies in the position represented in the figure, its lower end resting on a cushion-bar K, which lies horizontally under the whole row of mallets. The key A R has a pin C, tipped with a bit of the softest cork or buckskin. This reaches to within  $\frac{1}{16}$ th of an inch of the shank of the mallet, but must not touch it. The distance E C is about  $\frac{1}{4}$ d or  $\frac{1}{8}$ th of the length of the shank. When the end A of the key is pressed down on the stuffing (two or three thicknesses of the most elastic woollen list), it raises the mallet, by means of the pin C, to the horizontal position E d, within  $\frac{1}{8}$ th or  $\frac{1}{16}$ th of an inch of the wire F; but it cannot be so much pressed down as to make the mallet touch the wire. At the same time that the key raises the mallet by means of the pin C, it also lifts off the damper G (a bit of sponge) from the wire. This damper is fixed on the end of a little wooden pin G g, connected with the lever g H, which has a vellum hinge at H. This motion of the damper is caused by the pin I, which is fixed into the key near to R. These pieces are so adjusted, that the first touch of the key lifts the damper, and, immediately after, the pin C acts on the shank of the mallet. As it acts so near to its centre of motion, it causes the head D to move briskly through a considerable arch D d. Being made extremely movable, and very light, it is thus tossed beyond the horizontal position E d, and it strikes the wire F, which is now at liberty to vibrate up and down, by the previous removal of the damper G. Having made its stroke, the mallet falls down again, and rests on the soft substance on the pin C. It is of essential importance that this mallet be extremely light. Were it heavy, it would have so much force, after rebounding from the wire, that it would rebound from the pin C, and again strike the wire. For it will be recollected, that the key is, at this time, down, and the pin C raised as high as possible, so that there is very little room for this rebound. Lessening the momentum of the mallet by making it very light, making the cushion on the top of the pin C very soft, and great precision in the shape and figure of all the parts, are the only securities against the disagreeable rattling which these rebounds would occasion. In respect to the solidity and precision of workmanship, the British instruments are unrivalled, and vast numbers of them have been sent to all parts of the continent.

The compass of the grand piano-fortes, with additional keys, is equal to the general scale of notes at Ex. 3: Plate I. including, of course, all the half-tones.

The *Clavol*, or Finger-keyed Viol.—The first notice of this instrument is in the American newspaper *True Briton* for Aug. 9, 1802, where it is announced as the invention of a Mr. Hawkins of New York. By the description



scription in this paper, it seems much to resemble the lyrichord of Plemius, that was exhibited for two or three years in the middle of the last century; the tones of which were produced by refined wheels, which in their revolution acted as so many fiddle-bows; the strings being brought into contact with the wheel by the pressure of the fingers on the key. One peculiarity in the lyrichord was, that the strings were tuned by weights. The basses were very fine, but the treble screamed intolerably. Plemius was a German, and the first who attempted to make large piano-fortes in England.

The instrument called a *claviol* by Mr. Hawkins, produces its effects from bowel-strings, by a refined horse-hair bow, and is played with finger-keys, like the piano-forte. The tones of this instrument are stated to possess "the sweetness of the harmonica, the richness of the violin, and the grandeur of the organ." These indeed are high pretensions; and, if they should be just, the invention would be a most valuable discovery. However, we do not find that the instrument has come into use, or is much known, even among professors. Mr. Hawkins afterwards came to London; and exhibits his invention, with some other mechanical contrivances, more curious than useful, at a museum (and oil-shop) which he has opened in Tichfield-street.

The instrument contains 68 gut-strings, stretched in a vertical position, and arranged in four series, of 17 strings each. The first series, corresponding to the double bass, consists of seventeen large strings, thirteen of which are covered with wire; the longest string is thirty-eight inches, and the shortest twenty-eight inches: the second series, producing the tones of the violoncello, from twenty-eight to fifteen inches in length: the third, the viola, from fifteen inches to seven long, and the fourth, the violin, are from seven to three inches long. The frame containing the strings is of equal height in all parts, though the effective lengths of the strings are only to be reckoned from their respective bridges to the keys. Each string is provided with a finger-key, which keys are arranged in the same order as in the piano, &c. and each string is adjusted to sound the proper note for the key to which it belongs; the adjustment is made at the upper end of the string by a screw. To keep the instrument in tune through all variations of the atmosphere, each string is stretched by a helical spring, attached to the lower part of the frame at one end, and to the string at the other; by this means the tension of the string is always equal, notwithstanding its variations of length from the state of moisture in the air, as the force of the spring will not be sensibly changed by such minute alterations of length.

The next parts to be spoken of are the *refined horse-hair bows*, which are the most ingenious parts of this invention; they are four in number, one to each series of strings. The horse-hairs are arranged within a circular ring of brass, which ring is sustained by three wheels within it, which admit of its rotative motion, and at the same time allow the strings to pass down through another ring, and to be as near to the hairs as possible, without touching them: for this purpose, each series of the strings is arranged in a circular form, to correspond with the curvature of the bows. The circular bows are put in motion by a pulley on the axes of the wheels; and a strap or band, passing round this, communicates motion from a vertical axis which is common to the whole, and is put in motion by a wheel, on the axis of a crank, which is turned by a treadle, and provided with a fly-wheel, to regulate the motion, and continue it while the treadle is ascending. The communication between the horizontal axis of the crank and fly-wheel, and the vertical axis giving motion to the bows, is made by two conical wheels, covered with soft leather, touching each other in their circumferences: this is an excellent substitute for toothed wheels, both with respect to the freedom and silence of the motion, as the toothed wheels, being necessarily constructed of me-

tal, could not be divested of an unpleasant sound, hardly to be endured in a musical instrument.

The keys move on a fulcrum; and, when pressed down by the fingers, the opposite end elevates one arm of a bent lever; at the same time the other arm is drawn back, and a wire moves one arm of a second angular lever; the other arm ends in a hook, which is engaged with the string corresponding to the keys. From this arrangement, when the key is forced down, the string is drawn in contact with the hairs of the bow, situated just above the second lever; and the friction causes the string to vibrate in the same manner as the violin. It is scarcely necessary, after this, to say any thing respecting the action of the instrument: the performer keeps the bows in continual motion by the treadle, which moves with such ease as to be no impediment to the freedom of motion requisite for a performer on a keyed instrument: an increase of pressure on the keys is said to cause that fulness of tone which is so much admired in the violin; but the delicate softness produced by lightly touching the keys is a principal advantage in this instrument; and it is a great recommendation, that by its assistance these excellencies of the violin are secured to every good performer on keyed instruments. The velocity of the bows is another circumstance to be attended to at the same time with the pressure: when moved slowly, the tones will be soft and delicate; but, when the velocity is increased, the tones are full, and adapted for grandeur of effect: the alteration in velocity is easily made. Mr. Hawkins has also adapted a balance-weight to the treadle, which acts to turn the wheel while the treadle is ascending, so that by this assistance the wheel can be made to revolve exceedingly slow, without danger of *pitching*, or stopping at the highest or lowest points of the cranks. In this manner the velocity of the bows is completely manageable by the greater or less pressure upon the treadle, and the performer may easily make a sudden transition from quick to slow, by resisting the ascent of the treadle when he wishes to retard it, or pressing the treadle while it is descending to accelerate the motion of the wheel. It is worthy of notice that each bow moves with a different velocity, as is best adapted to produce the vibration of the strings it is applied to. This is effected by the different diameters of the four pulleys on the vertical axis, which turns the bows: these are in such proportion, that, when the double-bass bow revolves at the rate of 25 times per minute, the others make 35, 50, and 75, revolutions, in the same period. The instrument is provided with pedals, one of which, when pressed down, brings a piece of rosin in contact with the hairs of each bow, so as to cause no interruption for this necessary operation. Another pedal elevates the bows all together, and causes them to act nearer the bridge than when it is not in use, producing the effect well known to performers on the violin when they bow near the bridge: for this purpose the frame containing the three wheels of the bow terminates in a stem, which slides in a socket, and can be elevated or depressed by the pedal just mentioned. A third pedal brings a piece of leather lightly in contact with the middle of each string, which causes it to vibrate in two portions, and sound the octave in a beautiful tone, similar to the musical glasses.

The above instrument appears to have been an improvement on Clagget's *aieton*, which the inventor did not live to bring to perfection. Some very respectable professors have expressed a very high opinion of the merit of this last instrument. It was stated to have had, in power, dignity, and solemnity of tone, a great resemblance to the organ; and to have been free, by its construction, from the only characteristic imperfection of that delightful and sublime instrument. The inventor gave it the name which has been mentioned, from its being *αἰετὸν ὄργανον*, "always in good tune." The celestina-mechanism of the instrument, acted by pressure on a system of metallic bars, (or pitch-forks.) It is evident, that the mass of metal



metal exempted these from any sensible change of tone, such as the changes of the atmosphere must always produce in wires or strings. At the same time, the very nature of the construction would cause the instrument to have a somewhat hard tone, and to speak slowly; but for *andante*, *adagio*, and *largo*, movements, such as are generally the sublimest and most pathetic in the serious opera, and the most admirable in oratorio-music, (the two highest departments of this divine art,) it seems probable that this instrument would have had the advantage over every other. Mr. Capel Loft says, "The clearness, purity, and fullness of tone, the beauty of swell and diminution, which distinguished it, were inconceivable." But Mr. Lydiatt, who "was engaged with Mr. Clagget, in an attempt to remove those mechanical difficulties in its construction, which retarded the approximation to perfection of an invention which, by its novelty, attracted some approbation and encouragement from the scientific world," has given a less favourable but more just account, which we extract from the *Monthly Magazine* before quoted.

"The effects produced by this instrument in pathetic compositions, were extremely sublime, but very equivocal; as will be easily conceived by a reference to the mechanism, which I shall briefly attempt to give some idea of. The tones were produced from forks made of steel, in the manner of the pitch-fork used for tuning instruments, except those to produce the bass, the prongs of which were hollow tubes instead of solid masses of metal. These were pressed by the touch of the key on a revolving belt of seal-skin, about an inch broad. The hair-side, which received the pressure of the fork, was rubbed with a preparation of rosin, and the forks themselves were thinly coated with the same substance. From this, it will be seen, that the tones were drawn from these metallic forks in the same manner as from the strings of a violin by the bow; but by no means so instantaneously. It was indeed, as has been observed, *slow to speak*: and by the friction of the belt against the metal, in the performance of a few bars, the rosin was in a great measure taken off, and its imperfections consequently became more evident. This was the state of the aëtion at the death of its inventor; the misfortune of whose life it was, to have ideas theoretically sublime, but deficient in practical utility."

The imperfections of both these instruments, arose from the impossibility of supplying the fiddle-bows regularly and equally with rosin. Clagget's had the additional inconvenience of the metallic forks, which could never produce a very pleasing tone. Clagget was, however, a man of very interesting manners, and respectable character, who disinterestedly devoted many years of his life to the improvement both of keyed and wind instruments; whose merit in both was acknowledged by unquestionable judges; whose science, and taste, and judgment, accompanied him to the grave, with little earthly reward.

While we are upon the subject of curious inventions, we must not omit to mention, that Messrs. Kauffman, senior and junior, of Dresden, have lately exhibited four instruments composing an orchestra, which they call the *Belloneon*, the *Cordalaudion*, the *Automaton Trumpeter*, and the *Harmonicord*. The upper part of the *Belloneon* exhibits a trophy of arms, in the midst of which are placed twenty-four trumpets reversed; and the lower part incloses two kettle-drums with their sticks. It executes flourishes and marches with extraordinary perfection. If it contained other wind-instruments, it might be compared with Maelzel's Panharmonicon, now exhibiting in London. The *Cordalaudion* produces together and separately the sounds of the piano-forte and four flutes, which play with such precision and accuracy, that the illusion is complete. The *Automaton* gives out trumpet-notes with double sounds. But these instruments, though highly curious, are surpassed by the *Harmonicord*. It is shaped like an upright piano-forte: a cylinder is adapted to it, and turns at a very small distance from the strings,

which are the same as those of the piano. By pressing down the keys, which embrace four octaves and a half, the friction is effected. Two pedals serve to make the rotation of the cylinder quicker or slower, and to render the vibration stronger or weaker. Under the hands of Messrs. Kauffman, this instrument is said to give out sweeter tones than the harmonica, and to produce a truly celestial harmony.

*Of the Tuning of Keyed Instruments.*—The striking improvements which have been made in modern times in the manufacture of keyed instruments, will be admitted by every one who is in any degree conversant with music; and we have been credibly informed, that one very eminent piano-forte maker has for years past expended a thousand pounds annually in experiments. But this branch of the art seems to be so circumstanced as naturally to defy all attempts at perfection. It is well known that our piano-fortes and organs have, in general, only 12 notes in every octave; but that, mathematically speaking, there are a great many more. Convenience will not permit the number now in use to be much augmented, though in some instruments the number of finger-keys in every octave exceeds 12; but none could possibly extend to comprehend *all* the necessary notes, without being absolutely unmanageable by the performer. Attempts have therefore been made of late to adapt the usual number and scale of finger-keys to a larger number of notes, by means of shifting pedals: a very simple contrivance for this purpose, has been devised by Mr. Löffschman, of Newman-street; and something of the same kind has been invented by the Rev. Mr. Lister. Some of the defects, however, will never be completely removed; and to cure them in part is to have a part more perfect, and the remainder more imperfect, than in the generality of instruments: so that it is perhaps best, under all circumstances, to rest contented with the means which have been long since adopted for removing, or rather compromising, the difficulty. This is what is denominated *temperament*; and it consists in dividing the mathematical discrepancies between different notes so that they may approximate to each other: for instance, where an interval would occur between D<sup>♯</sup> and E<sup>b</sup> in the key of C, and both might be wanted in that or in some key: it is customary to raise the lower, and sink the higher, of those two notes in a trifling degree, so as to make them serve for each other. The ear scarcely appreciates this management in any case, and therefore no unpleasant effect is produced. Some fingers, indeed, complain that the voice is not so tractable in this respect; but it is perhaps not evident that any good foundation exists for the assertion; and it seems probable, that the voice is not more accurate than the ear. The objection, however, is made clearly perceptible by the monochord, to the description of which contrivance Dr. Crotch has allotted the last chapter of his work on Musical Composition. That instrument is merely a single string strained to any given degree of tension over two bridges, in the manner of a violin-string. When sounded open, it gives a certain note; when divided into two equal parts by pressure in the middle, it gives the octave of the first; at two thirds, a fifth, and so on; as explained at p. 323 of this article. As the scale becomes more refined, the numbers are either not reducible to any fractional denomination, or require very extended denominators; and, to give the whole their tones with perfect accuracy even to the extent to which composition is sometimes practised, 24 notes would be required in every octave, and still it would not be mathematically perfect. Mr. Löffschman, in a perspicuous little pamphlet published by him in explanation of his improved piano-fortes, has stated the exact relative values of the notes in the following numbers: C 3600; C<sup>♯</sup> 3445; D<sup>b</sup> 3364; C<sup>♯♯</sup> 3297; D 3220; D<sup>♯</sup> 3081; E<sup>b</sup> 3009; E 2880; F<sup>b</sup> 2811; E<sup>♯</sup> 2756; F 2691; F<sup>♯</sup> 2576; G<sup>b</sup> 2515; F<sup>♯♯</sup> 2465; G 2407; G<sup>♯</sup> 2304; A<sup>b</sup> 2250; A 2153; B<sup>b</sup> 2102; A<sup>♯</sup> 2061; B<sup>b</sup> 2012; B 1926; C<sup>b</sup> 1881; B<sup>♯</sup> 1843;



2843; and the values of them, according to the usual mode of temperament, as follows: C 3600; C\* 3445; D 3220; Eb 3009; E 2880; F 2691; F\* 2576; G 2407; G\* 2304; A 2153; Bb 2012; B 1926. This is according to what is termed the equal or mean-tone temperament. Dr. Crotch approves that method of tuning, and it is most commonly in use. Other modes, however, have been suggested, as calculated to bring the instrument nearer to the desired mathematical perfection; and the late earl Stanhope (the extent of whose contributions to all the mechanical arts is generally known) has explained a new mode of tuning: the principal feature of which consists in its taking two intervals in the scale, without reference, in the usual manner, to the foundation or key-note. For instance, after having tuned the other notes on the instrument by perfect intervals, his lordship recommends that Ab or G\* should be tuned exactly halfway between E and C, forming, with those notes, what he terms two bi-equal thirds; and that the interval between G and its E double octave should be divided into three equal portions, called tri-equal quints: those portions to be occupied by D and A. The effect of this arrangement is to make the two bi-equal thirds something sharper than perfect thirds, so that one perfect third and two bi-equal thirds shall form a perfect octave, and the tri-equal fifths rather flatter than perfect fifths. Our musical readers know that, if an octave be made by tuning the thirds successively, the upper note will be too flat; and that, if seven octaves be made by tuning the fifths in succession perfectly, the highest note will be too sharp. The difference in the latter case is technically called the *great wolf*, and in the former a *little wolf*. We understand, however, from an ingenious artist, that, on an experiment of the Stanhope mode of tuning, it was not found so agreeable as the ordinary mode; from which we may infer, that it is not eligible to take the relative values of the notes arbitrarily, even in the smallest degree. It also seems to follow, that it is unsafe, on this subject, to trust to any other guide than the ear.

After all that has been said on tuning, it does not appear to us that any satisfactory result has been produced, except that the defects existing on keyed instruments can never be completely removed; and, although for some particular occasions the new improvements may be found useful, or it may even be desirable that special modes of tuning should be adopted, yet the instruments ordinarily in use, and the common mode of tuning, will be amply sufficient and most advisable for general purposes. Those, however, who wish to tune according to lord Stanhope's method, will find ample directions in his lordship's pamphlet, and in the New Monthly Magazine, vol. iii. p. 453. and vol. iv. p. 56.

The HARP.—The harp, generally speaking, is an instrument of a triangular figure, strung with catgut, and placed upright between the legs of the person who plays it.

Papias, and Du Cange after him, will have the harp to have taken its name from the *Arpi*, a people of Italy, who were supposed the first that invented it; and from whom they say it was borrowed by other nations. Menage, &c. derive the word from the Latin *harpa*, and that from the German *herp*, or *harp*. Others bring it from the Latin *carpo*, because touched or thrummed with the fingers. Dr. Hickes derives it from *harpa*, or *hearpa*, which signify the same thing; the first in the language of the Cimbri, the second in that of the Anglo-Saxons. The English priest who wrote the life of St. Dunstan, and who lived with him in the tenth century, says, cap. ii. "Sumpsit secum ex more citharam suam, quam *paterna lingua* hearpam vocamus;" which intimates the word to be Anglo-Saxon.

This instrument is struck with the finger and thumb of both hands. Its music is much like that of the spinet, all its strings going from semitone to semitone; whence some call it an *inverted spinet*.

In Strutt's "Saxon Antiquities," vol. i. we have—  
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presentations of antique harps, one with nine strings, and another with eleven, copied from illuminated MSS. in the British Museum; and a lyre of four strings of the middle ages, "beaten with a small instrument for that purpose;" meaning a *plectrum*. The early musical instruments of all countries, like those of Greece and Rome, are of small compass:

Tibia non, et nunc, orichalco juncta tubæque  
Æmula; sed tenuis, simplexque foramine vacuo  
Aspirare.

Fortunatus, (lib. vii. carm. 8.) calls the harp an instrument of the barbarians:

Romanusque lyra, plaudat tibi barbarus harpa,  
Græcus Achilliacha, crotta Britanna canat.

The *crotta* is the *crwth* Latinized, in all probability an original British or Welsh instrument, as it is never mentioned in any classical author.

In days of chivalry, the harp passed for the most noble and majestic of instruments; and on this account the romancers place it in the hands of their greatest heroes, as the ancient Greek bards did the lyre. This instrument was in such general favour, that an old poet has made it the subject of a poem called "*Le Dict de la Harpe*;" The Ditty, or Poem, upon the Harp;" and praises it as an instrument too good to be profaned in taverns or places of debauchery, saying, that it should be used by knights, esquires, clerks, persons of rank, and ladies with plump and beautiful hands; and that its courteous and gentle sounds should be heard only by the elegant and good.

The Welsh harp seems of very high antiquity in our island under the Druidical government. Before the invasion of Julius Cæsar, the Britons had music; and the bards, like the levites among the Hebrews, were the sacred musicians; and we have the authority of venerable Bede, for social and domestic singing to the harp in the Saxon language, upon this island, at the beginning of the eighth century: though he himself wrote in Latin, the only language of the church and the learned then, and for many ages afterwards.

The "Musical Relics of the Welsh Bards, by Mr. Edward Jones, Welsh Bard to H. R. H. the Prince of Wales," published in 1784, is a curious and entertaining work; and, being written by a native of Wales, and an eminent performer on the harp, we shall extract from it Mr. Jones's account of the musical instruments of his country. "The musical instruments, anciently used in Wales, are as different from those of other nations as their music and poetry. These instruments are five in number: the *telyn*, or harp; the *crwth*; the *pißgorn*, or pipe; the *tabwrdd*, or tabor; and the *corn buelin*, cornet, or bugle-horn. We find that the *telyn*, or Welsh harp, was always peculiar to our bards; though, probably, there was no difference betwixt the harp, when in its ancient primitive form, and the Grecian lyre; for Diodorus Siculus records, that the Celtic bards played on instruments like lyres: *οργανον τρις λυγραις ὁμοίον*. In the time of the Welsh princes, an hereditary harp was preserved with great care and veneration in the household of every prince and lord, to be bestowed successively on the bards of the family; and these were as indispensable among the possessions of a gentleman as a coat of arms.

"The triple, or modern Welsh harp, has three rows of strings; the two outside rows are unison; the middle row the flats and sharps. Its compass extends to five octaves. Some of its present appendages were probably the addition of the latter centuries. This celebrated instrument has been recently improved by the invention of pedals, which change it, without fresh tuning, into all the different keys, and have rendered it much less complicated and inconvenient by reducing it to a single row of strings." This may, probably, not only improve the instruments in the principality, but the style of music and taste of the country, which seem to have been totally confined to national tunes and vulgar variations. Mr. Jones himself,



who, during many years, was the chief bard, and best performer on the *telyn*, an ancient Welsh harp, has quitted that instrument for the pedal-harp, on account of the superior facility with which all kinds of music for keyed instruments can be executed with as little difficulty as on a piano-forte; and it is, we suppose, in allusion to the *pedal-harp*, that Mr. Jones says, "in expression and variety the harp has no rival, which every one will acknowledge who knows how the heart is soothed by its delicate and softer sounds, as well as animated by its powerful and brilliant tones." The *triple harp* seems to imply that there have been in Wales three several kinds of harps: the *single harp*, with only one string to each note; the *double harp*, with two; and the *triple harp*, with three strings.

In the ninth year of queen Elizabeth, an *eisteddfod*, or session of the bards and minstrels, was appointed at Caerwys, in North Wales. This was reviving an ancient custom in the principality; as the Welsh historians and annalists inform us, that Gruffudd ap Conan, prince of Wales, established a congress or meeting of masters of music, about the year 1100, who underwent a public examination for degrees in their art, and for prizes, the chief of which was a silver harp with nine strings, worn by the victor as a badge of honour. One of these prize-harps is still preserved in the curious collection of Cambro-British antiquities of the Mostyn family; and another was in the possession of the late Dr. Burney.

Miss Hutton, (Third Tour in North Wales,) writing in the year 1799, says, "The profession of bard is not extinct in N. Wales; though I believe some other occupation is generally annexed to it, to procure a livelihood. The Welsh still have bards, who compose *extempore* verses, and sing them to the harp; and, as one of the most celebrated of ancient times was denominated *Rhys Coch yr Eryri*, Rhys the Red of Snowdon, so one of the most noted of the modern is called *Dafydd Dû yr Amblech*, David the Black of Amblech; from their respective complexions, and places of residence." The bards form themselves into different societies, and each elects a president; who, at their meetings, proposes a subject. Every one present makes *extempore* verses upon it; and a prize is awarded to him whose composition is judged to be the best. The Welsh say, that some of these pieces have great merit; but that they lose much on being translated into English." Of the aptitude of the Welsh for vocal music, see p. 298.

On Plate XVII. fig. 1. represents an ancient Welsh single harp; fig. 2. an ancient triple harp; and fig. 3. a modern triple harp. Fig. 4. is a *bell-harp*, so called from its being swung about, by those who play upon it, like a bell. It is about 21 inches long; its strings are of brass or steel wire, fixed at one end, and stretched across the sound-board by screws fixed at the other end. It comprehends four octaves; and the strings are struck with the thumbs, the right hand playing the treble, and the left the bass; and, in order to draw the sounds the clearer, the thumbs are armed with a little wire pin. This instrument is in the possession of Mr. Edward Jones, whose work we have quoted.

The harp was a favourite instrument with our Saxon ancestors. All our historians relate the romantic story of Alfred reconnoitring the Danish camp in the disguise of a harper. Anlaf, and other Danish chiefs, played Athelstan the same trick in the Saxon camp. The harp of David, as well as that of Alfred, must have been of a different size and construction from the triple Welsh harp to be portable; particularly that of David, when he danced before the ark. Eusebius, indeed, calls it a *lyre*, and informs us that he carried it with him wherever he went, to console him in his affliction, and to sing to it the praises of God.

Millico, when in this country in 1774, accompanied himself in singing his elegant canzonets on a small harp, which he slung over his shoulder like a guitar, with which, though of a very different form, and open like a lyre, was equally portable.

The modern Irish harp is a single instrument, strung with metal strings of brass wire, nine in number, and calculated for mere melody, or a treble part. Carolan's tunes had no bass to them originally, as we have been informed by a native of Ireland, and a good judge of music, who had often seen and heard old Carolan perform. It was only after his decease, in 1738, that his tunes were collected and set for the harpsichord, violin, and German flute, with a bass, Dublin, folio, by his son, who published them in London by subscription, in 1747.

Galilei, the father of the great mathematician Galileo, says that the Italians, who were in possession of the harp before the time of Dante, had it from Ireland.

According to Mr. Walker, in his "Historical Account of the Irish Bards," the Irish have four different species of harp: 1. The *clar-fch*, or *clar-seach*, commonly denominated the Irish harp. 2. The *keirnine*, a species of dulcimer. 3. The *cionn cruit*, of ten strings, a kind of guitar. 4. The *greamthine cruit*, the *cruith* of the Welsh. Whether the Welsh had their music from Ireland, according to Giraldus Cambrensis, or the Irish had theirs from the Cambro-Britons, we shall not attempt to determine; but shall leave St. David and St. Patrick, and their champions Jones and Walker, patriotically to dispute the point.

We can obtain no satisfactory account of the time when, and on what occasion, the harp was assumed in the arms of Ireland. The learned Mr. O'Halloran says, it was by order of Henry II. and Mr. Ledwich by that of Henry VIII. (Walker's Irish Bards;) but neither of these gentlemen assigns a reason for it, or gives any authority for his assertions. Fig. 5. on the preceding Plate represents the ancient harp of Brian Boromh, preserved in the university of Dublin. Its height is 32 inches.

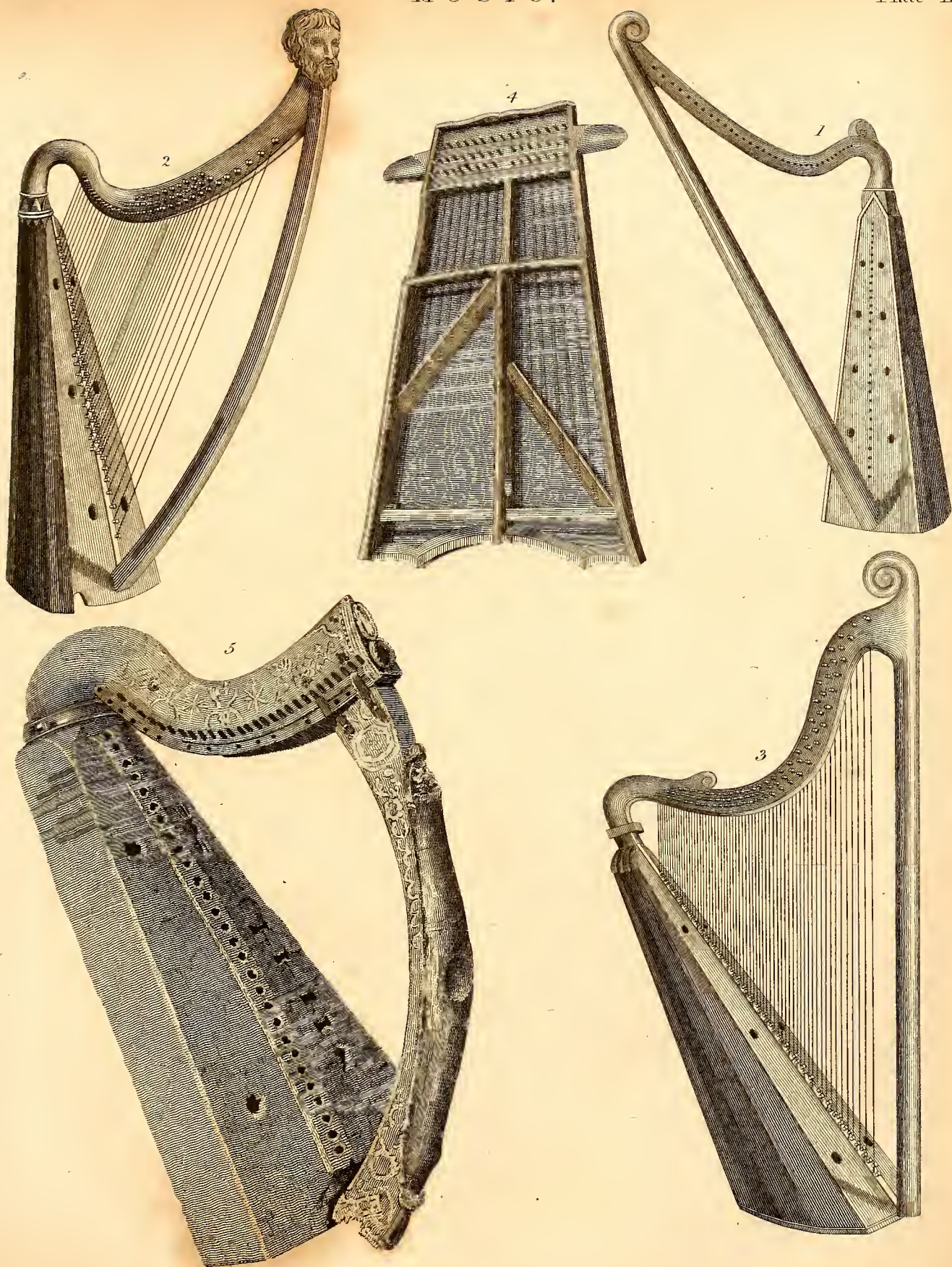
Before the invention of pedals, the whole range of sounds in the double and treble harps on the continent had been reduced to the diatonic scale, with a single string to each note; the semitones being produced by brass rings with the left hand, at the top of the instrument, which were both difficult to get at and disagreeable to hear, from the noise which, by a sudden motion of the hand, they occasioned.

It was some time after this expedient was put in practice, before the secret of producing the half-notes by pedals was discovered. This method, which has rendered it a female instrument, was invented at Brussels about the year 1757, by M. Simon, who still resided in that city in 1772. It is an ingenious and useful contrivance, in more respects than one; for, by reducing the number of strings, the tone of those that remain is improved: as it is well known that, the less an instrument is loaded, the more freely it vibrates. It was in the year 1772 that Dr. Burney first heard the pedal-harp at Paris and Brussels, where the instrument was constructed of an elegant form, and beautifully ornamented. Its tone was sweet, distinct, and capable of the most minute shades of piano, and the most touching expressions. Among all the musical instruments in use, there is no one more becoming to a female figure.

We shall not attempt to instruct our readers how to apply these pedals to the harp, or to explain their operation: the mechanism is too complicated to be taught by verbal instruction. We have only to observe, that the harp, like the organ and piano, has by degrees had its compass extended, so that at present its scale is the same as that of the grand piano with additional keys. The semitones are produced by means of the pedals: and it is commonly tuned in *E<sup>b</sup>* with three flats; but Erard's new patent harps are tuned in *D<sup>b</sup>* with seven flats, having two motions of the pedal to each note, making it first natural and then sharp.

The *Eolian harp* is rather a toy than a musical instrument; yet it produces an agreeable harmony, merely by the action of the wind; and hence the name. It is thus constructed. Let a box be made of deal, as thin as possible, of a length answering to the width of the window in which it is to be placed; five or six inches deep and seven





*Welsh and Irish Harps.*





or eight inches wide. Let there be glued upon it two pieces of waincoat about half an inch high, and a quarter of an inch thick, to serve as bridges for the strings; and within-side, at each end, glue two pieces of beech, about an inch square, of length equal to the width of the box, which are to sustain the pegs. Into these fix as many pins (such as are used in a harpsichord) as there are to be strings in the instrument, half at one end, and half at the other, at equal distances. It now remains to string it with small catgut, or blue first fiddle-strings, fixing one end to a small brass pin, and twisting the other round the opposite pin. When these strings are tuned unison, let the instrument be placed, with the strings outward, in the window to which it is fitted; and it will, provided the air blows on that window, give a sound like a distant choir, increasing or decreasing according to the strength of the wind. There must be sound-holes in the middle; and, the thinner the top is, the better will the instrument perform. Thompson, in a note to his celebrated Ode on this instrument, ascribes the invention of it to Mr. Oswald; whereas it was known to Kircher above a hundred years before; and the method of constructing and using it is described by him in a book intitled *Magia Phonetica et Phonurgia*.

This instrument was constructed in an improved form by the late Rev. W. Jones. The strings, instead of being on the outside, are fixed to a sounding-board or belly within a wooden case, and the wind is admitted to them through an horizontal aperture. In this form the instrument is portable, and may be used any-where in the open air.

The Æolian harp produces all the harmonies of a single string, divided in harmonical proportion. See p. 322. The tension of the strings must not be great; as the air, if gentle, has not sufficient power to make them vibrate; and, if it blows fresh, the instrument does not sing, but scream. Its crescendo and diminuendo, or the gradual advancing and retiring of its delicate tones, are very pleasing.

Kircher has attempted to account for the phenomena of the Æolian harp, by supposing the current of air to strike on different portions of the string. But this is contrary to experience; for, if we suppose the Æolian note to be one-fifth above the original note of the string, that is, one-third of the whole; then, according to Kircher, the remaining part would be at rest, which is not the fact; for an obstacle applied to any other point besides the quiescent points of division, will destroy the Æolian tone. The chords also, that would arise on this theory are not such as really take place in Nature; thus, where the chord consists of the notes F and A, the first note F is produced, according to Kircher, by the blasts striking on one fourth of the string; and in this case, the remaining part of the string must be at rest, according to Kircher, which is contrary to experience; or, if it be agitated as one string, it must produce the note of three-fourths of the whole string, that is, a fourth above the bass-note; whereas, the note really produced, is the double octave to the third above the bass-note.

Mr. Young, in order to ascertain the order of the notes in this instrument, took off all the strings but one; and, placing it in a proper situation, he was surprised to hear a great variety of notes, and frequently such as were not produced by any aliquot part of the string; and he often heard a chord of two or three notes from this single string. These complex and extraordinary phenomena at first perplexed him; and he almost despaired of being able to account for them on the principle of aliquot parts. On farther examination, however, he found that they all flowed naturally and easily from this principle. Having directed his attention to the effect of a current of air rushing against a stretched elastic string, he observed, that a blast against the middle point of the string moved the whole of it from its rectilinear position; and that the string, by its elasticity, returned to its former position; so as thus to

continue vibrating and exciting pulses in the air, which produced the tone of the entire string. If the current of air be too strong and rapid, when the string is bent, it will retain its curvature; and, though the whole string cannot perform vibrations in this case, the subordinate aliquot parts may; and these will be of different lengths, according to the rapidity of the blast. Thus, when the velocity of the current increases so as to prevent the vibration of the whole string, those particles which strike against the middle points of the halves of the string, agitate those halves, as in the case of sympathetic and secondary tones; and, as these halves vibrate in half the time of the whole string, though the blast may be too rapid to admit of the vibration of the whole, yet it can have no more effect in preventing the motion of the halves than it would have on the whole string if its tension were quadruple; for the times of vibrations in strings of different lengths, and agreeing in other circumstances, are directly as the lengths; and in strings differing in tension, and agreeing in other circumstances, inversely as the square roots of the tensions; and therefore, their vibrations may become strong enough to excite such pulses as will affect the drum of the ear; and the same may be said of other aliquot divisions of the string. Those particles which strike against such points of the string as are not in the middle of aliquot parts, will interrupt and counteract each other's vibrations, as in the case of sympathetic and secondary tones, and therefore will not produce a sensible effect. These principles are illustrated and applied by Mr. Young, in his *Enquiry into the Principal Phenomena of Sound and Musical Strings*; Lond. 1784, 8vo.

**THE LUTE.**—We are now arrived at that class of instruments which are furnished with a neck, on which frets are raised, and against these the strings are pressed with the left hand, while they are made to speak by means of the fingers and thumb of the right, and in some cases with a plectrum or quill.

All that is known with certainty concerning the LUTE, has been related under that word, vol. xiii. p. 785, 6. On the annexed Plate XVIII. fig. 1 is a lute, according to the best authorities; its length is 3 feet 8 inches. Fig. 2 is the theorbo, or arch-lute; length, 5 feet 8 inches, in the collection of the late Mr. D. Walker. It has two necks, the second and longer of which sustains the four last rows of strings, which are to give the deepest sounds. The meaning of the word *tiorbe*, or theorbo, is not known: Mace only says, that *Θε*, in Greek, “begins a very high name;” meaning *Θεος*, God, perhaps from its high and sublime tones. Some will have it to be the name of the inventor. The theorbo is an instrument which for many years succeeded to the lute, in the playing of thorough-basses. It is said by some to have been invented in France, and thence introduced into Italy, &c. Mace says, that the theorbo is really the original, or “old English lute.” The chief difference between the theorbo and the common lute was, that the former had eight bass or thick strings twice as long as those of the lute; which excess of length must have made it rather unmanageable. Mace (*Musick's Monument*) has noticed the inconveniences of the great length of the neck in this instrument: “Those very extreme long heads which are usually put upon theorboes, are both troublesome to tune, and inconsistent with the punctilioes and criticisms in art; they rendering the instrument disproportionable within itself; for in the use of it, these extraordinary long basses commonly over-ring and drown the trebles; or, if (to help the matter) you strike them so much the softer, yet they seem not to be of the same kinship with the shorter strings.” P. 205.

In the same work, there is a print of the theorbo (but with the neck shortened) and common lute (called the English and French lutes) joined together, and christened “the lute dyphone, or double lute of fifty strings.” He tells us, that it is as easy to play upon as any other lute; but we really cannot understand it; and must therefore

refer



refer the reader to the book itself (ch. xli. p. 203.) for an explanation. This strange instrument was of his own making; and he says, (thus confirming that the theorbo was the original English lute,) "When I had finish'd it, I be-dect it with these fine rhimes following, fairly written upon each belly; viz.

(First, round the theorboe-knot, thus:)

"I am of old, and of Great Britain's fame:  
Theorboe was my name."

(Then next about the French-lute knot, thus:)

"I'm not so old; yet grave, and much accute,  
My name was the *French lute*."

(Then from thence along the sides, from one knot to the other, thus:)

"But, since we are thus joynd both in one,  
Henceforth our name shall be *The Lute Dyphone*."

**THE GUITAR.**—The word *guitar* seems naturally deducible from the Latin *cithara*. There is little doubt but the Roman C was hard like modern K; and the Italian word *chitarra* is manifestly derived from the Greek *κithara*. But, what is more to our purpose, the learned Ainsworth observes, that "the Roman C is more probably framed from the Greek Γ, its right and perpendicular line, for the more ease and quick dispatch in writing, having degenerated into a semicircle, instead of an angle. The rank which C holds in the Latin alphabet, answering to that of Γ in the Greek, is a farther proof of this extraction; and in many Latin words K and G are written indifferently, as *Caius Cneus*, or *Gaius Gneus*;" so that, when the Romans had got the letter G into their alphabet, which was not till after the first Punic war, they would be as likely to have written *kithara*, for a harp or lute, as *cithara*.

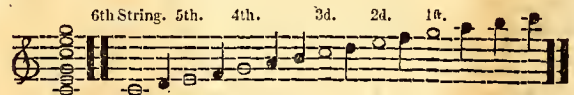
It is difficult to trace the origin of the guitar. The rest of Europe had it from the Spaniards, to whom it was probably brought by the Moors. It is however the general opinion in Spain, that it is as ancient as the harp. Either through respect for this opinion, or from the sweet reverie which it inspires, being congenial with the national, tender, gallant, discreet, and melancholy character; whether, in short, the silence of the beautiful nights in Spain, when the inhabitants are most alert and active, is most favourable to its mild and dulcet harmony, we know not; but it is established there as a national instrument. It has had the same success among the Portuguese and the Italians; and seems to have been at all times the favourite instrument of warm climates: it is so portable, and graceful of carriage, that serenaders, nocturnal revellers, and day-break lovers, prefer it to all other tuneful interpreters of passion. The Portuguese having lost a battle, 14,000 guitars were found on the field of battle. (Menagiana. tom. i.) The guitar is made to be heard alone, or with a voice. It is unfit for a concert, and has therefore given way to more powerful instruments.

In France, some lovers of music revived, a few years ago, the passion for this instrument, which was in great vogue there in Louis XIVth's time; and was a very sociable companion of French vaudevilles, pastorals, and brunettes, of which, says M. Laborde, it augments the charms.

The common guitar used in England has frequently had fits of favour in this country. About fifty years ago, its vogue was so great among all ranks of people, as nearly to break all the harpsichord and spinet makers, and indeed the harpsichord-masters themselves. The ladies disposed of their harpsichords at auctions for one-third of their price, or exchanged them for guitars; till old Kirkman, the harpsichord-maker, after almost ruining himself with buying-in his own instruments for better times, hit upon the expedient of purchasing some cheap guitars, and made presents of several to girls in milliners' shops, and to ballad-singers in the streets, whom he taught to accompany themselves with a few chords. This soon made the ladies ashamed of their frivolous taste, and return to the harpsichord.

During the guitar paroxysm, not a song or ballad was printed, without its being transposed and set for that instrument, at the bottom of the page; as in the beginning of the last century was done for the common flute. The old tablature, however, was thrown aside, and the same notation adopted for the guitar as for other instruments; but confined to the key of C natural, except by Marella, a good player on the instrument, and not a bad composer, who tuned and taught the guitar in the key A major.

The English guitar has six wire strings; of which the four first are double, the fifth and sixth single but covered; the three first are steel, the others brass. They are tuned as expressed by the notes close to the clef in the following example; and the scale of the instrument follows the double bar in the order of the strings, 6, 5, 4, &c. the open note denoting the open string:



The Spanish guitar, fig. 3, has six strings also, but single, and made of catgut. It is of a much larger size than the *chitarra* of Italy, or the guitar used in France or England, being a full yard long; and, in form, it seems to have been constructed of a section of a pumpkin or gourd, to which is adjusted a belly of deal, and a neck at the upper part of the body of the instrument. It has frets, dividing each string into semitones: of these the tension must be extremely tight round the neck, for fear of their giving way. The strings are fastened to a bridge fixed to the lower part of the belly, and supported by a nut at the end of the neck. The strings are governed by pegs or metal pins at the back of the neck.

The tablature of the guitar in Spain and Portugal is still the same as that of the lute; but in most other countries, its notation is the same as for the harp or piano-forte. In the ancient tablature, letters of the alphabet, or ciphers, are used for the melody and accompaniment. This method, though ancient, is preferred in France for the convenience and carriage of the hand, the arrangement of the fingers, the clearness of the tone, the harmony and facility of execution. If this instrument is not studied as much as the harpsichord or piano-forte, it is hardly possible to find the positions of the hand with sufficient readiness.

There are two ways of performing on this instrument, either by sweeping or pinching the strings; many affect one way more than the other: some use both ways occasionally, which is preferable. The most extensive, and the most susceptible of execution, is the pinching of the strings. The arpeggios are more harmonious, because all the strings are in vibration; but they must be touched very lightly and delicately with the right hand, and with firmness and correct position with the left hand, to produce a good effect; for nothing is so easy as to metamorphose this instrument, of which the harmony may be rendered so sweet, into a mere kettle. The strings are pinched or thrummed between the rose and the bridge; but the arpeggios ought to be made between the rose and the last fret of the neck, that is, about the middle of the strings, to avoid the harshness resulting from playing too near the bridge, where the strings are more stubborn and unmanageable than towards the middle.

This guitar is superior in tone, expression, and power, to the common guitar strung with wire. About forty-five years ago, soon after the conspiracy at Lisbon, of Malagrida and others, a Portuguese gentleman, or musician with the appearance of a gentleman, of the name of Meneses, probably involved in the plot, resided some time in London, seemingly as a man of fashion, who performed in a very superior manner on the large Spanish guitar, strung with catgut, or bowel-strings. He was so great a



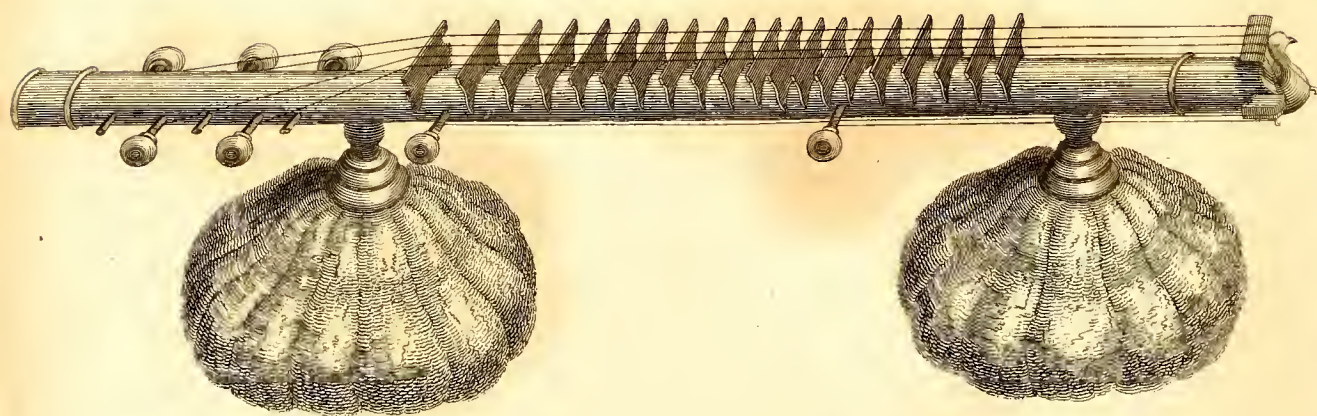


1. The Lute. 2. The Theorbo, or Arch-Lute. 3. The Spanish Guitar.  
 4. The Mandoline. 5. The Harp-Guitar.









*The Indian Guitar, and its Scale.*



master of the instrument, and so able a musician, that he played voluntaries upon it in the same full and learned manner of a great performer on the organ; led off subjects, pursued them in three and four parts with science and fancy through all the keys of legal modulation; and in slow movements, his taste and expression were equally admirable with the learned and masterly effusions of his allegros. Dr. Burney was "so fortunate as to hear him perform at lord Eglington's, with lord Kelly, Bach, and Abel, all good judges and severe critics."

The Spanish guitar had originally but four strings; afterwards it had five double wire strings, of which we are told the three first were tuned unisons, and the fourth and fifth octaves to each other: sometimes the fifth string had no octave, lest it should overpower the rest; and the first string was often so false, that it was thought most advisable to play it single. At present this guitar has six catgut strings, a sixth or bass string having been added, a double octave below the first, and which is stopped by the thumb of the left hand. The tuning is still like that of the lute, entirely by fourths, except one major third: viz. E, A, D, G, B, E; as in the following example, where the open notes express the open strings.

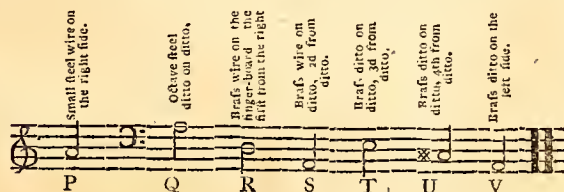


The MANDOLINE, fig. 4. has been sufficiently described under that word, vol. xiv. p. 272. The distance from the bridge to the nut is the same as the violin, 13 inches; and its scale and tuning are exactly the same, which therefore we shall defer till we come to describe that instrument.

The HARP-GUITAR, as improved by Mr. Levien of Pontonville, is represented at fig. 5. Mr. L. was rewarded with ten guineas, from the Society of Arts, for his invention. The improvement consists in an appendage to the finger-board, by which any of the strings can be raised or lowered half a tone, so as to introduce such flats or sharps as are necessary, in order to perform the music that is ordinarily met with, without the necessity of previously transposing it into the keys of C, G, or F, as is the case with guitars in general. This is effected, by placing across the first fret of the finger-board a series of metal loops, or stops, through which the strings pass, the holes in the loops being widened so as to permit the strings to vibrate therein unimpeded. These loops, being screwed into the finger-board, can be turned so as to compress the string on each side in the manner frequently done on pedal-harps, and thereby to raise the tone of the string half a note higher; thus introducing those sharps, &c. which are necessary to the performance of the music, without the necessity of cross-fingering, the only method of producing them hitherto used, and the great difficulty of doing which is sufficiently known. Fig. 5. represents the head of the improved guitar, and part of the finger-board: *a, a*, the nut; and *b, b*, the metal loops arranged across, or in place of the first fret. Fig. 6. is a side-view of these parts. Fig. 7. is an enlarged view of that part of the finger-board containing the first fret, with the loops screwed into it of their full size; one of the loops, *a, a*, is here represented as being turned, and acting upon the string so as to raise its tone half a note higher; and fig. 8. shows one of the loops, with its screwed tail or stem, and its hole widened, as described above, but which more evidently appears in the section of the hole, fig. 9, the opposite sides of it being rounded off, so as not to gall or injure the gut or silk string, by pressing against it, when turned. The loops are turned by means of a slit made across the handle of the key, used in turning the pins to put the guitar into tune.

Plate XIX. represents the INDIAN GUITAR, called the *Vina*, or *Been*, with the manner of playing it, and its VOL. XVI. No. 1119.

scale. This instrument has been already described at vol. xiii. p. 840. from the Asiatic Researches. Francis Fowke, esq. caused an accurate drawing to be made of the *been*, both separately and in the hand of the player, which he transmitted to the president of the Asiatic Society, (the late lamented sir William Jones;) and the communication enriched the first volume of their Transactions, from which we have copied it. The wires are seven in number, and are tuned in the following manner:



There are nineteen frets; and the notes that they give will appear on the scale which is engraved underneath the figure of the instrument itself. "I have added below," says Mr. Fowke, "the names which the performer himself gives to the notes in his own language. It is very observable, that the semitones change their names on the same semitone as in the European scale. On the wires R and S, which are those principally used, there is an extent of two octaves, with all the half-tones complete in the first octave, but the G<sup>♯</sup> and B<sup>♭</sup> wanting in the second. The performer's apology for this was, that he could easily get those notes by pressing the string a little hard upon the frets F<sup>♯</sup> and A<sup>♯</sup>, which is very true from the height of the frets; but he asserted that this was no defect in his particular instrument, but that all *beens* were made so. The wires T and U are seldom used, except open. You may absolutely depend upon the accuracy of all that I have said respecting the construction and scale of this instrument: it has been done by measurement; and, with regard to the intervals, I would not depend upon my ear, but had the been tuned to the harpsichord, and compared the instruments carefully, note by note, more than once."

Of VIOLS.—In the seventeenth century, most musical families were in possession of a *chef of viols*, as it was called, which consisted of two trebles, two tenors, and two basses, with six strings upon each, all tuned lute-fashion, by 4ths and 3ds, and the necks *fretted*. The compass, and *accordatura*, of this instrumental family, were the following:



Here it will be observed, that these instruments, as we noticed in the Spanish guitar, are uniformly tuned by fourths, except one major third, which in these viols is between the third and fourth string. The treble viol is an octave above the bass; and the tenor viol a fourth above the bass, and a fifth below the treble. The passages given to these several instruments, at this time, discover no kind of knowledge of the expressive power of the bow; and even Orl. Gibbons, who composed so well for voices in the church, seems very little superior to his contemporaries in his productions for instruments. Indeed, his madrigals of five parts, as well as those of many others, are said in the title-page to be *apt for viols* and voices: a proof that with us, as well as the ancient Greeks, and other nations, there was at first no music *expressly composed for instruments*; consequently, the powers of these instruments must have been circumscribed; and, when this music was merely played without the assistance of the human voice and of poetry, capable of no great effects.

As to the proportions of the viols, honest Mace, whose quaint expressions we love to quote, tells us, "Your trebles,



bles must be just as short again in the string, viz. from bridge to nut, as are your basses, because they stand eight notes higher than the basses; the tenors just so long as from the bridge to the F fret, because they stand a fourth higher than your basses.

"After all this, you may add to your preps a pair of violins, to be in readiness for any extraordinary jolly or jocund consort-occasion: but never use them, but with this proviso; viz. be sure you make an equal provision for them, by the addition and strength of basses; so that they may not out-cry the rest of the musick, (the basses especially;) to which end it will be requisite you store your preps with a pair of lusty full-sized theorboes, always to strike in with your consorts, or vocal musick; to which that instrument is most naturally proper. And now, to make your store more amply compleat, add to all these, three full-sized lyro-violis; these being the most admirable things made, by our very best masters, for that sort of musick, both consort-wise, and peculiarly for two and three lyroes. Let them be lusty smart-speaking violis; because that, in consort, they often retort against the treble; imitating, and often standing instead of, that part; viz. a second treble. They will serve likewise for division-violis very properly. And, being thus stored, you have a ready entertainment for the greatest prince in the world."

The violis in present use are none of them fretted, nor have any of them more than four strings. Of these, the first place is due to

The VIOLIN.—This is a well-known instrument with four strings, which are tuned fifths, and played by a bow. It has a neck, like the old treble viol; but the finger-board has no frets.

The origin of the violin, according to the French account, is unknown. It is only supposed to have been invented about the ninth or tenth century; to which opinion we should have subscribed, had not some ancient monuments remained with an exact representation of its form. In the pictures of Philostratus, in an ancient grotto, may be seen many violins, which are represented much like those of the present times, except that the neck is shorter. Amphion is there represented, playing upon a kind of viol or violin, with five strings, and with a bow like our's, and quite different from the plectrum of the ancients. It is believed, that Athenæus means the bow, when he says, "the sceptre is one thing, and the plectrum another." It is imagined that by the *sceptre* he means the bow. The pit, or grotto, on the walls of which we see violins like the present, is found on silver medals which were struck by order of Scribonius Libo, a very considerable personage at Rome. An account of these may be seen in Pierre Valerien, author of the Hieroglyphics, book xlvii.

The violin seems to have been more cultivated in Germany, during the 17th century, than in any other part of Europe; as appears by the number of performers who, according to Walther, have excelled, and the numerous composers and pieces published for that instrument, which he has recorded in his Dictionary.

Of the composers for the violin in the last century, Telemann, the concert-master Graun, Fr. Benda, Neruda, and Janitsch, were in favour through Prussia and Saxony; while only Hofmann, Schwindl, and Wagenfeil, were heard at Vienna; Holtzbaur, J. Stamitz, Filtz, Cannabich, Toeski, and Fräntzel, at Mannheim; and Bach and Abel in London. But in less than ten years, all these were superseded by Haydn, Ditters, and Vanhall. At present, Rosetti, Mozart, and Pleyel, share with them the public favour; indeed (says Dr. Burney, Hist. Mus. vol. iv.) there has lately been a rage for the music of Pleyel, which has diminished the attention of amateurs and the public to all other violin music. "But whether this ingenious and engaging composer does not draw faster from the fountain of his invention than it will long bear, and whether his imitations of Haydn, and too constant use of semitones, and coquetry in *ralentandos* and *paujes*, will not be

soon construed into affectation, I know not; but it has already been remarked by critical observers, that his fancy, though at first so fertile, is not so inexhaustible, but that he frequently repeats himself, and does not sufficiently disdain the mixture of common passages with his own elegant ideas."

The violin has been cultivated with good success in England during the last forty years. It is within our remembrance, that the opera-band consisted chiefly of Germans and Italians, and that a play-house band could not be made effective without one or more Germans to lead the principal parts. Foreigners being thus encouraged, we need not wonder that, during the last century, almost all the great violinists of Europe, except Somis and Tartini, have visited this country; but Giardini, at one time perhaps the best performer in Europe, residing here so many years, formed a school, which furnished our orchestras with a greater number of able performers on that instrument than can be found in the capital of any other kingdom in Europe. And we may venture to assert, from our own knowledge, that the lowest ripieno in the opera orchestra, at present, has more hand, and is a better fight's-man, than the leader of that band in Festing's time.

The violin consists, like most other instruments of the viol kind, of three parts; the *neck*, the *table*, and the *sound-board*. At the sides are two apertures for sound, and sometimes a third towards the top, shaped like a heart. The bridge, which is between the apertures, bears up the strings, which are fastened to the two extremes of the instrument; at one of them by a screw, which stretches or loosens them at pleasure.

The style and sound of the violin are the gayest and most sprightly of all other instruments; and hence it is, of all instruments, the fittest for dancing. Yet there are ways of touching it, which render it grave, soft, languishing, and fit for church or chamber music. Indeed, it is well observed by Dr. Crotch, that stringed instruments played with a bow, and the violin in particular, are superior in point of expression to keyed instruments, as they combine the *softenuto* of the organ, the precision of the harpsichord, and the variety of power of the piano-forte; and are also capable of producing the smallest intervals.

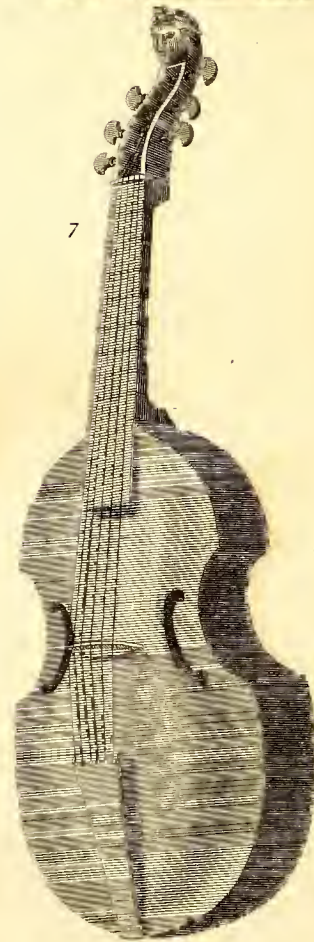
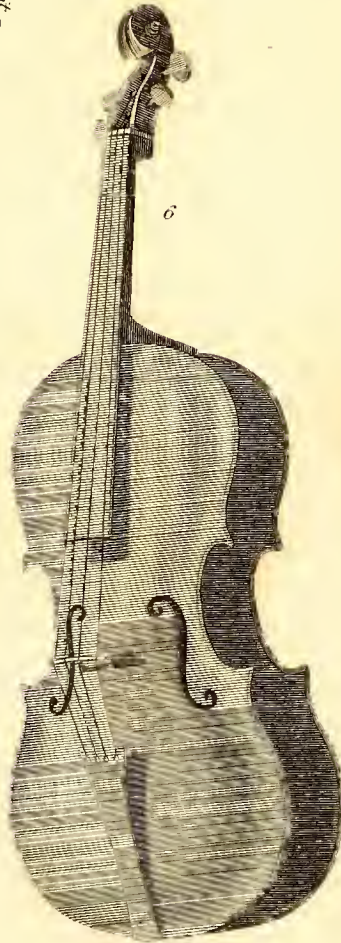
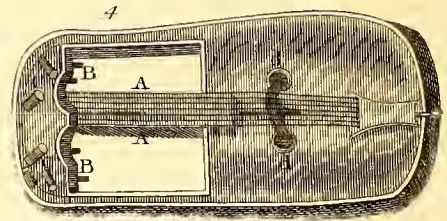
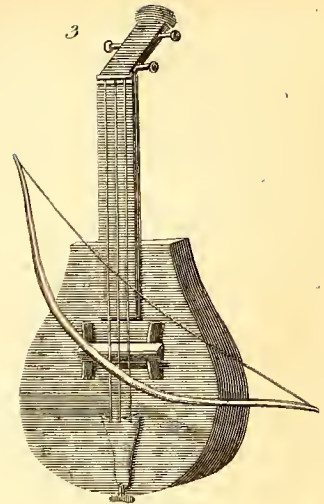
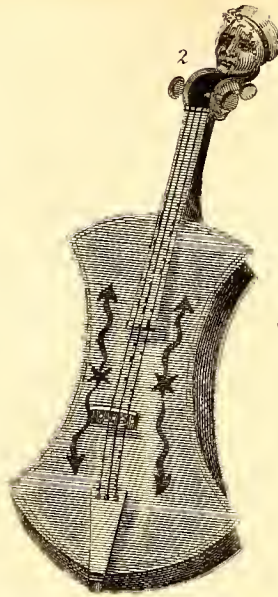
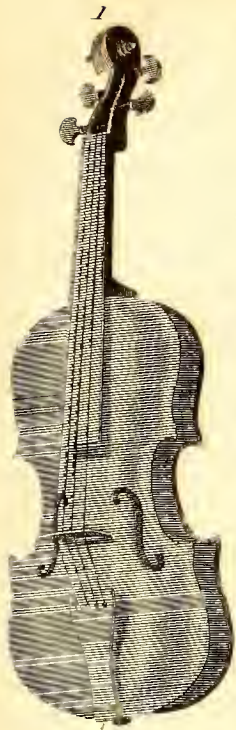
The violin generally makes the treble, or highest parts, in concerts. Its harmony is from 5th to 5th. Most nations, ordinarily, use the G clef on the second line, to denote the music for the violin; only, in France, they use the same clef on the first line at bottom: the first of these methods is best where the song goes very low; the second where it goes very high.

Merfennus speaks of the tenor and contra-tenor violin, which, he says, differ only in magnitude from the treble violin. But at present we have no such instrument in use as the contra-tenor violin; the part proper to it, being with ease performed on the violin; and, accordingly, in concertos, overtures, and other instrumental compositions of many parts; the second violin is in reality the counter-tenor part. It is much to be doubted, says Sir John Hawkins, (Hist. Mus. vol. iv. p. 115.) whether the counter-tenor violin ever came into England. Anthony Wood, speaking of the band of Charles II. makes no mention of the contra-tenor violin. Before the restoration of Charles II. says he, and especially after, viols began to be out of fashion, and only violins used, as treble violin, tenor and bass violin; and the king, according to the French mode, would have twenty-four violins playing before him while he was at meals, as being more airy and brisk than viols.

The old lutenists and violists marked the progress and influence of the violin with jealousy. Though now the basses in a concert bear a proportion to the violins of about one to four, the old masters thought there ought to be as many bass viols as trebles, or more. Thus says old master Mace: "Is it not reasonable, yea necessarily reasonable, that all the parts should be equally heard? sure it cannot reasonably be deny'd. Then what injury must







1. The Violin. 2. 3. Rebecs. 4. The Crowth. 5. The Viol d'Amore.

6. The Violoncello. 7. Viol di Gamba.



it needs be to have such things played upon instruments unequally suited, or unevenly numbered! viz. one small weak-sounding bass-viol, and 2 or 3 violins; whereas one (in reason) would think, that *one violin* would bear up sufficiently against 2 or 3 common sounding basses, especially such as you shall generally meet with in their ordinary consorts. This is a very common piece of inconsiderate practice at this day. But it has been objected, There has been an harpsicon, or organ, with it, What then? has not the harpsicon or organ basses and trebles equally mixt? and must not still the unequalness be the same? Or suppose a theorboe-lute: the disproportion is still the same: the scolding violins will out-top them all. Nay, I have as yet but suppos'd a small matter of unequalness in respect of what I have heard, and is still very magnanimously endeavoured to be daily performed; viz. six violins, nay ten, nay twenty or more, at a sumptuous meeting, and scarce half so many basses, which (as I said before) were more reasonable, sure, to be the greater number. Now I say, if this be not an injury, both to the music, the composer, and the compositions, let any judicious person judge." *Musick's Monument*, p. 233.

Plate XX. fig. 1. represents the violin, with its *natural scale* at the side of it; the open notes denoting the open strings as before. All the semitones are of course supposed to be included. But above this natural scale, by shifting upon a long finger-board, notes are produced as high as are expressed by the additional keys of a piano-forte; for which we refer to Plate I. Ex. 3.

Besides these notes, there is another set to be produced from the violin by a peculiar mode of fingering. These are called the *harmonics*. To produce these charming sounds, the finger should touch the string as slightly as possible; and, when the fourth finger is used, the first should be placed in the usual way, as a fulcrum, while the fourth is very slightly laid on. In the following Example, the figures underneath denote with what fingers the notes should be taken; and the small notes above are the harmonics produced:



The *viola piccola*, or kit, called in French *violon de poche*, or in short *poche*, has exactly the same scale as the violin; the length of the finger-board and neck the same; only the body is smaller.

The *rebec* is the most ancient violin in France; it had but three strings, and the romancers and troubadours frequently mention it. A figure of the minstrel Colin Mufet, is still preserved at the entrance of the church of St. Julien des Menefriers, at Paris, playing on the *rebec*. The time is not known when the fourth string was added to this instrument. It is still used in its primitive state, as a trichord, in Turkey and other Eastern countries. Its three strings are tuned *gths*, and played with a bow.

Etymologists have tortured themselves to find a derivation for the name of a vulgar instrument, no longer in use. Some trace it from the Arabic, some from the Celtic, the Welsh, the Spanish, Italian, and old French. *Rebec, ribbe,* and *ribble*, seem to be the same instrument; and are often indiscriminately used by Gower, Chaucer, and the still more ancient bards of Normandy, and our own country. The following passages are from Tyrrwhitt's Chaucer :

*The Millere's Tale.* Speaking of the Parish Clerk.

A mery child he was, so God me save;  
Wel coude he leten blod, and clippe and shave,  
And make a chartre of land, and a quitance,  
In twenty manere coude he trip and dance,

(After the scole of Oxenforde the,)  
 And with his legges casten to and fro;  
 And playen songes on a small *ribble*;  
 Therto he song somtime a loud quynible,  
 And as wel coude he play on a giterne.  
 In all the toun n'as brewhous ne taverne,  
 That he ne visited with his solas,  
 Ther as that any gaillard tapstere was.  
 But soth to say, he was fomdel squamous  
 Of fasting, and of speche dangerous.

*The Coke's Tale.* Speaking of the Prentis.

For sothly, a prentis; a revelour,  
That hantheth dis, riot and paramour,  
His maister thal it in his shoppie abie,  
Al have he no part of the minftralcie.  
For theft and riot they ben convertible,  
Al can they play on giterne or *ribible*.  
Revel and trouth, as in a low degree,  
They ben ful worth all day, as men may fee.

*Ribeba*, in the Decameron, ix. 5. is rendered by Maçon, the old French translator, *rebec*, and *guiterne*; but in the above passages the *giterne* is distinguished from the *ribible*.

As the head, or scroll-work, of old viols and violins, used to be curiously carved, so seems to have been that of the rebec. Chaucer compares the face of an old woman, an old trot, to the head of a rebec. Rabelais does the same :

— A tel minestrier tel rebec,  
 Tenant toujours le verre aubec ;  
 Car elle avoit *visage de rebec*.

At length the instrument came to be put for the old woman herself, perhaps from its shrillness. An old writer, quoted by Du Cange, has the following lines in his description of a concert :

· Quidam *rebeccam* arcuabant,  
Muliebrem vocem confingentes.

“Some, imitating the voice of a woman, fiddled on a rebecca.” Now we are informed, that a shrew, a quarrelsome woman, is to this day called in France *une Rebecca*; and from that circumstance, the head of a peevish woman was placed at the handle of this small violin, which, by its shrill sound, seemed to imitate the argute diapason of a scold: hence probably the name.

In the following passages from Chaucer, it seems to be put, not for an old woman merely, but a woman of ill fame; perhaps from *ribaude*, a bawd:

*The Frere's Tale.* The Archdeken's Sompnour.

And so befell, that ones on a day  
This sompnoour, waiting ever on his prey,  
Rode forth to sompne a widewe, *an olde ribbe*,  
Feining a cause, for he wold han a bribe.  
And happed that he saw befor him ride  
A gay yeman under a foreest side :  
A bow he bare, and arroes bright and kene ;  
He had upon a courtpey of grene,  
An hat upon his hed with frenches blake.

When that they comen somewhat out of toun,  
This sompnour to his brother gan to roun;  
Brother, quod he, here woneth an old *rebelke*.  
That had almost as lese to lese hire nekke  
As for to yeve a peny of hire good.  
I wol have twelf-pens though that she be wood,  
Or I wol somone hire to our office;  
And yet, God wot, of hire know I no vice.

It will have been observed, also, that Rabelais, in the passage quoted from him, uses the word in this sense also: "A tel minestrier tel rebec."

The rebec represented at fig. 2. was kindly communicated to us by a professor, whose apartment is a cabinet of curious instruments and scarce books on the science of music. This gentleman had fitted it up as a violin; with four strings; but he found that the additional string would







he pleased, genius, and profound knowledge of composition, delighted all hearers, and made them forget, or at least forgive, its querulous and nasal quality of tone. The instrument now is as dead as this great musician, and seems to have departed this life at the same time; viz. in the year 1787. (See p. 309.) The late Mr. Lidl, indeed, (says Dr. Burney,) played with exquisite taste and expression upon this ungrateful instrument, with the additional embarrassment of bass strings at the back of the neck, with which he accompanied himself; "an admirable expedient in a desert, or even in a house where there is but one musician; but to be at the trouble of accompanying yourself in a great concert, surrounded by idle performers who could take the trouble off your hands, and leave them more at liberty to execute, express, and embellish, the principal melody, seemed at best a work of supererogation. The tone of the instrument will do nothing for itself; and it seems with music as with agriculture, the more barren and ungrateful the soil, the more art is necessary in its cultivation; and the tones of the viol da gamba are radically so crude and nasal, that nothing but the greatest skill and refinement can make them bearable. A human voice of the same quality would be intolerable." (Burney, vol. iv.) That all idea of this once-favourite instrument may not be entirely lost, we have given a representation of it at fig. 7.

The VIOLONE, or Double Bass, is almost twice as big as the violoncello, and the strings are bigger and longer in proportion. Its sound is an octave lower than that of our bass-violin, which has a noble effect in great concertos; but this depends on the number of strings, and the manner of tuning them; some performers using four strings, and others three; and in the tuning of these there is a considerable difference. The true use of the violone is to sustain the harmony, and in this respect it has a noble effect: divided basses are improper for it, the strings not answering immediately to the percussion of the bow: these can only be executed with a good effect on the violoncello, the sounds of which are more articulate and distinct. The double-bass now most commonly in use has but three strings, which are tuned fourths; but the Italian violone has four, and they are tuned fifths. Their notation is as follows; but it is to be observed that the real sounds are an octave lower than here marked:



In general, however, a separate part is not composed for the double bass, but the performer looks at the violoncello-book, playing the same notes an octave lower, or omitting such notes as he thinks will not have a good effect. The words *Solo Violoncello*, and *Tutti Bassi*, are used to show when these instruments are to play separately, and when together. But Dr. Crotch very justly observes, that the parts ought to be written separately, with an occasional variation in the passages.

OF WIND-INSTRUMENTS.—The most ancient and simple wind-instrument was the imperforated flute formed of a single reed; and the next to that was the syrinx, or Pan's pipes, composed of several reeds joined together; and now so common as a street-instrument under the vulgar name of the *mouth-organ*.

The flute at present used in Otaheite, consists of one joint of cane; but differs from the flutes of the ancients, as it is sounded by one of the nostrils, whilst the performer stops the other with his thumb. This nose-flute gives only four sounds with the first degree of breath, which are, in an ascending series, by a semitone, a tone, and a semitone. If urged with a stronger breath, it will give octaves above these; but it then becomes ill in tune; and it seems the natives of Otaheite use no more than those first four sounds. Notwithstanding the small extent of

this series, yet, by the aid of varying the measure, it is capable of several different melodies, though the general cast of them will be melancholy.

An instrument something similar to the above, but of greater compass, was observed by Mr. Ledyard in the interior of Africa. Speaking of the present Egyptian music, he says, "Their music is instrumental, consisting of a drum and pipe, both which resemble these two instruments in the South Seas. The drum is exactly like the Otaheite drum; the pipe is made of cane, and consists of a long and short tube joined;" but he does not say in what manner, whether longitudinally, or laterally like the syrinx; probably the former. But the South-Sea islanders have a syrinx consisting of nine musical pipes of various lengths, and connected together in a parallel position. This instrument was brought by Capt. Fourneau from the Isle of Amsterdam in the South Seas, to London, in 1774; given to the Royal Society, and described in the lxvth volume of the Phil. Trans. by Joshua Steele, esq. The manner of blowing the pipes, in making the experiments, was the same as people use to whistle in the pipe-hole of a key. The upper series of tones, which are exact fifths to the lower, are easiest produced by an unexperienced person; and the lowest series, which we shall call fundamentals, with somewhat more address and a weaker blast. Besides the above-mentioned tones, if the velocity of the breath be increased a little, the first five pipes will give octaves to the fundamentals, and, if further increased, sharp thirds above these octaves. In the pipes 6, 7, 8, 9, Mr. S. could neither make the octaves to the fundamentals nor the sharp thirds; but, in their stead, the minor or flat third above the octave came, when the breath was urged beyond the degree requisite to produce the fifth. This minor third is an accident out of the natural order of tones produced from simple tubes, which Mr. S. does not pretend to account for. He then adds the notes of the several tones which he produced from each pipe; and he afterwards more particularly describes a syrinx of ten pipes from the same place. See Phil. Trans. abr. vol. xiii. p. 591, 2.

The most simple wind-instrument we have at present, is the *tabor-pipe*. This little flute has but three holes, and is played with the thumb, and first and second fingers of one hand; the third finger is not used at all; but the little finger is used by some dextrous players to stop the hole at the bottom; and, by stopping that hole and the others occasionally only half-way, a succession of notes has been produced from the middle C<sup>♯</sup> to A in alt, thirteen notes in all, including the half-notes.

THE ENGLISH FLUTE.—The common flute, called *flute à bec*, from the upper end, or mouth-piece, resembling the beak of a bird, was, at the beginning of the last century, till the works of Corelli came over, in far more general use as a concert-instrument than the violin. Sonatas for two flutes, and a thorough-bass, violone, or theorbo, were innumerable; with solos, duets, and concertos, for the same instrument; nor was there a ballad then printed which was not transposed for the flute at the bottom of the page; as, in the middle of the same century, almost every song and tune was set to the guitar. The concert-flutes for which this music was composed were generally F and C. Its scale is from the lowest D in the treble to D in alt; two octaves.

The *flageolet*, or octave-flute, has the same scale, but generally plays in the key of F. Its extent is from F on the first space to A in alt. We have not thought it necessary to give figures of these simple and well-known instruments.

THE GERMAN FLUTE.—This instrument consists of four pieces, or joints, inserted one in the other. Its name supposes it to be of German origin; but in France it is called *flute traversière*, from its being held in a horizontal position, or *across* the lips, to distinguish it from the common English flute, or *flute à bec*, which is kept in a more vertical or upright position.



To become a good performer on this instrument, the student must begin by acquiring a proper emboucheure, so as to procure a clear, full, and sweet, tone; a task far more difficult than is generally imagined. Every one can produce a tone on a common flute, but few are able, without teaching, to make the German flute speak. The instrument, being blown at the side, must be held parallel to the shape of the mouth, that the stream of air issuing from the breath of the performer may enter in part at the single orifice in the upper piece. Whether sitting or standing, the performer must be erect in his carriage, the head rather above than below its usual position, and a little inclining to the left shoulder; the hands high, without raising the elbows or the shoulders; the left hand bent out, and the same arm near the body. If the player is standing, the attitude should be firm, the left foot advanced, the body resting on the right hip, and the whole person free from constraint. The greatest care should be taken not to move the head or body, as many do, in order to mark the time. The attitude should have no singularities, nothing awkward or affected to attract the attention, or prejudice the audience against the performer. With regard to the position of the hands, the left is to be at the top of the flute, which is held between the thumb of that hand, and the fore-finger, which ought to stop the upper hole; the second hole with the middle finger, and the third by the ring finger. The right hand is to hold the lower part of the instrument; the thumb of this hand, which must be a little bent inwards, supports the flute below, and the three fingers of this hand, the fore finger, the middle finger, and ring finger, stop the holes: the little finger serves to press down the key at the tail-piece, or lowest joint, which key opens a hole out of the reach of the fingers. The flute must be held horizontally. No instructions for the lips in blowing the flute can suit the form of all mouths; but, when the student can make the instrument speak easily and freely, he must turn it in and out, by small degrees, till he gets the best tone possible; and then, beginning with the chest well filled with wind, as soft as possible to swell by minute degrees any note to its utmost power, and then to diminish it by the same degrees to a thread.

The principal and most usual key of the common German flute is D major with two sharps; and other keys are proportionably unfit for it, as they are farther removed from this key. The additional keys and joints of which we are presently to speak, are intended to facilitate the playing in different keys, as well as to extend the scale. The most proper passages for the flute, are sweet and soft melodies. In full parts, high and lengthened notes are given to it in modern music; and indeed the general use of wind-instruments in the full parts of modern music is to sustain the principal or essential notes of the harmony, and to supply the want of voices or of the organ.

The original compass of this instrument was from the lowest D in the treble to A in alt. This at least was the extent of the scale in 1752, when Quantz published his *Méthode de la Flûte*, who was the great king of Prussia's master on that instrument, and the first who added keys to correct and clear the bad notes. In the folio *Encyclopédie*, tome vi. there is a scale of all the tones, semitones, and shakes, possible on the instrument, with an additional half-note, C\* or Db, below the usual lowest note of its compass, and three notes above A in alt, the highest note of Quantz's scale. Quantz tells us, that in the year 1620 the German-flute had no key to make D\* or Eb; and that it was then called the *Swiss flute*. It was the French who added the first key; but it was not known by whom or when. Quantz himself added a second key in the year 1726, and, about 1732, a third. Tacet was the first to adopt these additional keys, and he added two others, but more for parade than use, for he seldom used them all; and indeed, the management of five keys in rapid performance, (says Dr. Burney,) "would be as

difficult as running divisions on an organ, with all the five short keys split into quarter-tones." Potter's patent-flute, however, has *seven keys*; and some have since been made with *nine*. Flute-players are also indebted to Quantz for the invention (in 1752) of the new joint for the upper piece of the flute, by which, without drawing out the middle piece, and without hurting the tone, the instrument may be raised or lowered half a note.

On Plate XXI. fig. 1. represents a German flute with all the additional keys; and at fig. 2. is Whetstone's patent mouth-piece, for obviating the difficulty of obtaining a good method of blowing. This little machine slides over the mouth-hole, and reduces the embouchure to the same certainty and ease as that of the *flûte à bec*. But this is nothing to what we have read (for indeed we have not seen or heard it) of the invention of the late Mr. Hogben, the surgeon, who, "being of a delicate form, and subject to cough, found that playing the flute affected his breathing, and gave him some alarm by an affection on the chest; so that he found it necessary, in order to continue the gratification which he derived from this instrument, to contrive an *artificial breath* for it. This he accomplished so perfectly and so conveniently, that *he could sing and play at the same time*. This notable piece of mechanism, is now in the possession of his surviving brother." *Gent. Mag.* Sept. 1815.

Many other improvements, or, at least, innovations, have been applied to this instrument since the time of Quantz; and, for some of them, patents have been obtained. Potter's patent-flute is furnished with metallic stoppers, for the holes under the keys, instead of leather.

Mr. Malcolm McGregor, of Bell-yard, Temple-bar, received the silver-medal and twenty guineas from the Society of Arts in the year 1813, for an improved German flute, which he presented to the society, accompanied with certificates from various eminent performers. The object of Mr. McGregor's improvement is, to give the means of tuning the instrument perfectly, when required to alter its pitch, which can be done to the extent of a note above, or half a note below, the *concert-pitch*, making an extent of a note and a half in the whole; by which means a piece of music may be performed in a different or easier key from that in which it is composed; while the same alteration of the pitch, being attempted upon other German flutes, would put them considerably out of tune, so as not to be endured. This is accomplished by making the instrument draw out proportionately at all the several joints which unite its parts; by this means, when the cork or stopple is drawn out to lengthen the tube, and thus to lower the pitch of the instrument, the several joints also admit of the tube being lengthened in its different parts, so that the several spaces between the holes will bear the same relative proportion to the whole tube, in its lengthened state, as they did before the alteration; by this means the sound, produced by all the different parts of the tube, will accord, or be in tune with each other. Mr. McGregor describes his contrivance as follows: "The flute is made, as usual, in four lengths, which are united by joints; made to draw out, in order to lengthen it at pleasure, each joint being fitted with cylindrical metal tubes, sliding like those of telescopes, for that purpose; the upper length has the mouth-hole in it, and the extreme end is shut up by a cork; as this is required to slide, to alter the length of the tube, it is rendered adjustable by means of a screw, made of ivory, and is part of a piece which goes completely through the cork, and is glued fast to it; the screw is received into an ivory cap, loosely fitted into the end of the tube, and resting with a flat shoulder upon the end of it; therefore, by turning this nut or cap round, the cork is drawn out, or may be pushed farther into the tube. A small pin, or tail, projects from the end of the screw, and goes through a hole in the end of the cap; it has lines or marks made upon it, which direct how far the cork is to be moved, for the purpose of tuning the instrument to any required pitch."





1 to 9. Wind Instruments.

10. to 13. Time Measurers.





pitch. This construction is common to many other German flutes; but, in this, the three joints, uniting the lengths, have also corresponding marks upon them, to show how much they are to be drawn out, to correspond with the alteration of the cork; and they also completely supply the place of the ordinary *thread-joints*, so very inconvenient in use." For a more minute description, with figures of the several parts, we must refer to the volume of the Society's Transactions for the year 1813.

Wood's patent-flute appears to us to be formed exactly upon the same principle, though perhaps improved in some particulars. But it is understood, that those who claim a reward from the Society of Arts are bound to give up their invention for the use of the public, and not to take out a patent. Mr. Wood, however, describes his flute as being "constructed on an entirely new principle; and so contrived, by means of tubes fixed to the several joints, that it is capable of being tuned to any pitch, whether sharp or flat, without the use of any extra joints, and the instrument still remains perfectly in tune, however the pitch may be altered, a perfection hitherto found unattainable. Another advantage is, that it is perfectly air-tight at the joints, so that the trouble of using thread, or any other preparation, is entirely done away with. The instrument is also preserved from the decay usually occasioned by the water resting on the joints, and is always ready for use." These improvements, (whether appertaining to Mr. Gregor or to Wood,) with the rich, full, and fine, body-tone they produce, and the great freedom with which every note may be produced, from the lowest note to the highest in altissimo, added to their portability, and the neatness and elegance with which they are finished, have gained this kind of flute a great degree of reputation.

The compass of the German flute at present extends to three octaves, from the lowest D in the treble to the octave above what used to be the highest D. But C\* or D<sup>b</sup> below the D<sup>b</sup>, has lately been acquired by blowing very softly, and turning the instrument inward; and the more recent improvements have carried it down to C<sup>b</sup>. It is to be observed that, the higher the notes on this instrument are, the wind must be increased, and the orifice of the lips somewhat more closed. Most of the notes are broken into octaves by a little additional force in blowing. The B, C, D, of the third octave, cannot be produced upon all flutes: with middle-pieces, which lower the tone of the whole instrument, they are easier to be produced. There are sometimes seven middle-pieces in use for flattening the pitch. These amount to about a tone; so that by their assistance a flute may accommodate itself to any pitch.

The *flauto piccolo* is a shrill flute, used by Handel to imitate the singing of birds, and by Gluck for the howling and whistling of the wind.

The *Fife* is also a small shrill flute, blown at the side, like a German flute. It is in almost every musical band; and, as the tabor and pipe enliven the dance, the fife and drum animate the soldier, particularly in the quick step. The fife has six holes, and furnishes two octaves, from the lowest D in the treble to D in alt. The Swiss first brought this instrument into France, after the battle of Marignan, under Francis I. since which time it has been admitted into regimental music, in preference to the common octave flute, being made less false (says Laborde) from its having a key, which the *fife à bec* has not.

The fife is an instrument particularly intended for the use of regiments; and forms, in conjunction with the drum, the only music with which many corps are provided. This little shrill tube is usually about fourteen inches in length, and of one piece, though some are made to take to pieces; but such are not suited to military use. It may be considered as a small kind of flute, especially if provided, as some are, with a key; but such are rare, the generality being confined to only six finger-holes, and an embouchure, or mouth-hole. The want of a key neces-

sarily occasions a difference in the fingering of many notes; but the compass, or extent, is about the same as that of the old German flute; namely, from D below the treble staff to D in alt; but all beyond B in alt are more or less harsh, and cruelly piercing to a sensible ear. Fifes are made of three several sizes, denominated A, B, and C, respectively; A being the largest and deepest toned, and one minor third below concert-pitch. The next size is made to correspond with the B<sup>b</sup> of the musical scale, and is generally used when playing with such military bands as use what are called B<sup>b</sup> clarionets. The C fifes are those at concert-pitch, and are chiefly used for the ordinary service of these instruments.

The OBOE, or Hautboy.—This instrument is blown with a reed. It is the natural treble to the bassoon, as their several names imply: *haut-bois*, high wood; *bas son*, low sound. The hautbois consists of four pieces, or joints; of which the upper piece, to which the reed is fixed, is the narrowest. The tube increases in diameter to the end, which terminates with a wide mouth like the trumpet. See the Plate, fig. 3.

The hautbois goes as low as the improved German flute; that is, down to middle C; and seldom, in full pieces, mounts higher than D in alt. Its principal key is that of C major: keys which have many sharps or flats should therefore be avoided in solos; but, in full music, this instrument is used in almost all keys.

This seems to have been an instrument in common use in the time of Shakspeare, and to have had a companion or bassoon for its bass. Falstaff, in describing the lank and meagre figure of Justice Shallow in his juvenile days, says: "The case of a *treble naturalbois* was a mansion for him, a court." Henry IV. Part 2.

Yriarte, in the notes to his Spanish poem, "La Music," regards its tone as nearer that of a human voice than any other wind-instrument; and there a kind of hautbois, which is called the grand oboe, or vox humana; and it takes in all the half-notes up to G in altissimo.

There is a spirit and hilarity in the tone of the hautbois, which is gay and enlivening in allegros, and yet is not without expression and complaint in pathetic strains. The most celebrated performers upon this instrument in this country during the last century, who are now no more, were San Martini, who arrived in England in 1723; his scholar Tommy Vincent, Fischer, and Simpson. Martini and Fischer were not only exquisite performers on their instrument, but admirable composers. The concertos which Vincent used to play fifty years ago, which were known to be Martini's, were admirable, full of fire, taste, and genius. They were never printed, nor do we know what became of them. The concertos which Simpson played were generally pasticcios, one movement from one composer, and one from another; but Fischer's, without being capricious, were so much his own, that neither the composition nor performance resembled any other.

The CLARIONET.—As the bassoon is called the bass to the hautbois, the clarionet might very well be called the tenor to it, being a kind of intermediate instrument played with a reed, but of a different and larger kind; and having the general aspect of a hautbois on a larger scale. The clarionet is, however, by professors, called a treble instrument, and the music for it is written in the treble clef; but (strangely enough) the notation is always a note higher than the music is to be played: thus the key of B<sup>b</sup> (the most common for this instrument) is written C<sup>b</sup>. The natural scale of this instrument is from B<sup>b</sup> (or the middle C) to C (or D) in alt; notes, indeed, are produced as low as E; but Dr. Crotch says, that below B<sup>b</sup> they are not in tune: an imputation against the instrument, which is indignantly repelled by a forty-years' player, now at our elbow. But the truth is, that wind-instruments are more out of tune than the professors of them are willing to allow, or than they can be sensible of themselves. A leader or conductor of a band is, however, fully



fully sensible of their imperfections. Their grand and imposing effects are when they are formed into entire (military) bands, without the mixture of more perfect instruments. The most agreeable keys for the clarionet, are those which have flats. It is naturally a very powerful instrument, and was originally appropriated to military bands; wherein two kinds are used; that just described, which is called the B $\flat$  or C clarionet; and a smaller one, called the F clarionet, which goes up to F in altissimo. Thus, then, this is an instrument of full three octaves in extent.

The Bassoon.—This, like the two preceding instruments, is played with a reed, and is a continuation of the scale downwards. It is composed of four different pieces or tubes, which are bound together like a faggot; hence by the Italians called *fagotto*. It has three keys of communication to open and shut the ventages, which, from the length of the instrument, are out of the reach of the fingers. It has a crook, or mouth-piece, to which the reed is fixed. (See fig. 4.) The whole length of the instrument is eight feet; but reduced to four, by being doubled up like a trumpet for convenience in performance and carriage. Its compass is three octaves, from double A $\mathbf{A}$  in the bass to A in the second space of the treble; of which the tones and semitones are as complete as on an organ, or any other keyed instrument. Every performer is not able to produce a lower sound than B $\mathbf{B}\mathbf{b}$  in the bass, or a higher than G in the treble; and indeed this is now generally considered as the scale. As this instrument can play equally well in all the usual keys, it may be used not only as a bass to the hautbois and other wind-instruments, but in the *tutti* it may play in unison with the bass stringed instruments.

In the last age, Miller was the most esteemed performer on the bassoon at all public places in England. At present, Holmes is the favourite.

Alexander and Jerome Bezozzi, in the service of the king of Sardinia, at Turin, were the most celebrated performers of their time; the one on the hautbois, and the other on the bassoon. These kindred instruments were rendered famous all over Italy during the middle of the last century, not only by the exquisite performance, but by the amiably-singular character, of these two brothers. Their long and uninterrupted affection and residence together, were as remarkable as their performance. They were brothers: the eldest, when Dr. Burney first heard them in 1770, was seventy, and the youngest sixty. The *idem velle et idem nolle* were as perfectly in tune as their instruments; so that they had always lived together in the utmost harmony, carrying their similarity of taste to their very dress, which was the same in every particular, even to buckles and buttons. They had lived so long and in such a cordial manner together, that it was thought, whenever one of them died, the other would not long survive him; which was exactly the case, both dying in 1780, within a few months of each other.

The compositions of these exquisite performers generally consisted of select and detached passages, yet so highly polished, that, like apophthegms or maxims in literature, each was not a fragment, but a whole; their pieces being in a peculiar manner contrived to display the genius of their several instruments and powers of performance. The eldest played the hautbois, and the youngest the bassoon; but it is difficult to describe their peculiarities of expression. Their compositions, when printed, gave but an imperfect idea of its sweetness and delicacy: such a perfect acquiescence and agreement together, that many of the passages seemed heart-felt sighs breathed through the same reed. No brilliancy of execution was aimed at; all were notes of meaning. The imitations were exact; the melody equally divided between the two instruments; each *forte*, *piano*, *crescendo*, *diminuendo*, and *appoggiatura*, was observed with a minute exactness that could be attained only by a long residence and study together. The eldest brother had lost his under front-teeth,

and complained of age; and it was natural to suppose that the performance of each had been better; however, to me, (says Dr. B.) who heard them now for the first time, it was delightful! If there was any thing to lament in so exquisite performance, it arose from the *equal perfection of the two parts*; which distracted the attention, except when in dialogue, so much as to render it impossible to listen to both, when both had dissimilar melodies equally pleasing. They were born at Parma, and had been upwards of forty years in the service of his Sardinian majesty, without ever quitting Italy, (except one short excursion to Paris, in 1755,) or even Turin, but for that journey, and another to visit the place of their nativity. They were men of a sober, regular, and moral, character; in easy circumstances; had a town and country house, and in the former many good pictures by the first masters.

The Bezozzi family has furnished many admirable musicians to Italy, and other parts of Europe. Gaetano Bezozzi, a celebrated performer on the hautbois in the king of France's service, was born at Parma in 1727, entered into the service of the king of Naples in 1736, and into that of the king of France in 1765. Dr. Burney heard him perform a concerto at Paris in 1770, and thought him superior to all he had then heard on the hautbois, except Fischer. His father, Joseph Bezozzi, had taught the celebrated brothers at Turin to play on the hautbois and bassoon. "M. Bezozzi of Paris," says Laborde, "in 1780, had during twenty-five years merited and enjoyed the highest reputation, as well as the esteem of all who knew him. His son was then lately received into the king's band; and his brother, Anthony Bezozzi, attached to the court of the king of Poland, had also a son in the service of that of Dresden, where we heard him perform in 1772, and found him a truly great performer. His swell was prodigious; indeed he continued to augment the force of a tone so much, and so long, that it was hardly possible not to fear for his lungs. His taste and ear were exceedingly delicate and refined; and he seemed to possess a happy and peculiar faculty of tempering a continued tone to different basses, according to their several relations: upon the whole, his performance was so capital, that a hearer must be extremely fastidious not to receive from it a great degree of pleasure."

THE SERPENT.—The serpent is an instrument of the bassoon-kind, blown by a mouth-piece. It has its name from its serpentine figure; and is composed of two pieces of walnut-tree wood, and covered with thin leather or shagreen. This instrument has six holes, which give it a compass of two octaves, of which the middle C of the piano is the highest note. The mouth-piece is fixed in a socket of copper or silver. Its neck is curved, and its mouth-piece is of wood or ivory.

The abbé de Bœuf, in his History of Auxerre, tom. i. p. 643, says that, about the year 1590, Edmond Guillaume, a canon of Auxerre, found the means of boring and turning a cornet in the form of a serpent, which was used in concerts at his house; and the instrument, having been perfected, became common in the great churches. In France, the serpent was formerly confined to the military bands; at present, says M. Laborde, it is confined to the church and processions. In cathedrals there is one on each side the choir.

Merfennus, who had studied this instrument, says, that if unfolded and straight, it would be more than six feet long. Laborde says eight feet. Merfennus also mentions some peculiar properties of it; e. g. that the sound of it is strong enough to drown twenty robust voices, being animated merely by the breath of a boy, and yet that the sound may be attuned to the softness of the sweetest voice. Another peculiarity of this instrument is, that, great as the distance between the third and fourth holes appears, yet, whether the third hole be open or shut, the difference is but a tone.

OF HORNS.—The French horn, which the French themselves style *cor de chasse*, and the Italians *corno da caccia*,



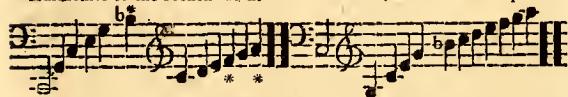
*caccia*, or "hunting-horn," is at the head of the horn-family.

The horn and trumpet have similar scales. The *generator*, or key-note, is the found of the whole tube, which however is never used; the sounds consisting entirely of the *harmonics*, or notes produced by the aliquot parts of the tube, which are the same as those produced by the similar parts of a string, as given in p. 323. Thus, supposing the generator to be C,

$\frac{1}{2}$	the length of the tube will give the octave, or	C.
$\frac{1}{3}$	will give the 12th, or 5th above the preceding	G.
$\frac{1}{4}$	the 15th, or 4th above the last	C.
$\frac{1}{5}$	the 17th, or major 3d above	E.
$\frac{1}{6}$	the 19th, or minor third above	G.
$\frac{1}{8}$	the 21st, or minor third above	Bb.
$\frac{1}{9}$	the 22d, or 2d above	C.
$\frac{1}{10}$	the 23d, or 2d above	D.
$\frac{1}{11}$	the 24th, or 2d above	E.
$\frac{1}{12}$	the 25th, or minor 2d above	F.
$\frac{1}{13}$	the 26th, or major 2d above	G.
$\frac{1}{14}$	the 27th, or 2d above	A.

These intervals are expressed in notes as below; but, as the horn-part is generally written an octave higher than it is intended to be performed, (namely in the real notes of the trumpet,) the following Example will be sufficient to show the scale of both:

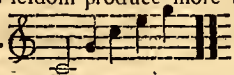
Harmonics of the French Horn. Written thus, as for the Trumpet.



Other notes have been inserted by respectable composers; but even the above are not all perfect, as those marked \* are out of tune on the common horn and trumpet.

We have given the scale only for the key of C; but, by the use of *crooks*, the horn is enabled to play also in the key of G, A, Bb, D, Eb, E, and F. But all the music for the horn is usually written as above, in the key of C, specifying at the beginning of the movement what the key is, as C, D, G, Eb, &c: and the performer puts on the proper crooks accordingly. At fig. 6 is a French horn with all its crooks.

The French horn is an admirable instrument in the field or theatre; and, when the composer is careful not to dwell on the fourth or sixth of the key, which are naturally false, and the performer has a nice ear, never overblowing or forcing the tone, its effect, in full pieces, is magnificent and grateful. By means of the hand inserted in the tube, the chromatic scale is obtained in *one octave*; the only regular series of sounds with which either the horn or trumpet is furnished. There have been, and there are now, players on the instrument, who can produce all the half-notes, and perform in all keys, major and minor; but the artificial notes, like those of the voice in falset, are inferior to the natural, less sonorous, and seem to be produced with difficulty.

The *bugle-horn*, and indeed every simple tube, must have a scale similar to the horn and trumpet. Its generator is generally an octave higher than that of the trumpet; but it can seldom produce more than the five first harmonics; viz.  But the bugle-horn is now made with holes and keys; and we are told that the 15th regiment has a band formed of bugles only.

The modern *cornet*, not very different probably from the ancient, (see p. 349.) is a coarse instrument called in France *bouquin*, or goat's horn, used by the cow-keepers to call the cattle together at milking and foddering time. But an instrument called a *cornet* was formerly used in the orchestras in Italy, under the name of *cornetto* and *cornettino*; and the performers on it are frequently mentioned with praise during the sixteenth and seventeenth centuries. Artusi, an intelligent writer on music, in his

treatise *Delle Imperfezioni della Moderna Musica*, gives a curious account of the state of instrumental music in his time. In describing a grand concert that was made by the nuns of a convent at Ferrara in 1598, on occasion of a double wedding, between Philip III. king of Spain with Margaret of Austria, and the archduke Albert with the infanta Isabella, the king's sister, he enumerates the several instruments that were employed, and points out their excellencies and defects: among these, though the violin is just mentioned, yet nothing is said of its properties; while the *cornet*, trumpet, viol, double-harp, lute, flute, and harpsichord, are honoured with particular remarks, both on their construction and use; but among these, the *cornet*, which has long been supplanted in the favour of the public by the hautbois, seems to have stood the highest in the author's estimation. The elder Doni, in his dialogue written about fifty years before, mentions the cornet more frequently than any other instrument: "Il divino Antonio da *cornetto*, perfettissimo — et M. Battista dal Fondaro con il suo *cornetto* ancora; che lo suona miracolosamente."

In the Transactions of the Royal Irish Academy for 1788, we have an account of three metal trumpets (from their shape we should call them horns) which had been dug up a short time before. These instruments were found by a peasant cutting turf in the bog of Carrick-O'Gunnell, county of Limeric, in the month of May, 1787, and by him sold to a brazier in the city of Limeric, who reserved them for the present possessor, (Ralph Onseley, esq. M.R.I.A. who sent the description to the Society.) "They are of a rich mixed metal, neither copper nor brass, but inclining rather to a copper colour. They resemble strongly those described in Walker's Historical Memoirs of the Irish Bards, (p. 109. Appendix,) except in the *middle piece*, which differs from any I ever heard of, and is, I believe, an unique. This tube is  $23\frac{1}{2}$  inches long, of one entire piece, and has a loop in the centre to run a cord through: at each end it has four holes, corresponding to four in each trumpet, through which two pins, or pegs, fastened the instrument. Both trumpets were fixed on the middle piece like the joints of a German flute, when first found, and very firm with rust and dirt, but the pins were lost. I should imagine this tube was only to hang them up by. Dr. Fisher (a celebrated performer on the violin, and doctor of music in the university of Oxford), who saw them with me in Limeric, conjectures that the two instruments thus connected by the tube, are *first* and *second*. The mouth or large end of the biggest is  $4\frac{1}{2}$  inches diameter, being one inch wider than the others. The third instrument, which was found separate, is said to be the *stoc* or *stinie*, a sort of speaking-trumpet described by Col. Vallancey in the Collectanea, No. XIII. and in Historical Memoirs of Irish Bards, p. 83. The mouth-hole is oval,  $1\frac{1}{2}$  inches long by  $1\frac{1}{4}$  wide; and the third, of which we are speaking, has a mouth-piece, like that of a French horn, fixed to it, but the others have not. They are all ornamented with little conical teats, or projections, at each end; viz. four at the small and six at the large ends, and four near each extremity of the middle piece. They have also four holes at the wide ends, as if some other tube was to be fastened occasionally within them, perhaps in the manner of lord Drogheda's, described by colonel Vallancey." They are of different curvatures: the largest, which we should call the bass-horn, is most bent, a line drawn from the large to the small extremity measuring  $9\frac{1}{2}$  inches; that of the other, connected with it by the tube, makes a chord of 12 inches; and the third, or separate one, a chord of  $15\frac{1}{2}$  inches. The weight of the three instruments and the connecting tube is 9lb.  $11\frac{1}{2}$  oz.

THE TRUMPET.—The word trumpet is formed from the Greek *σπουδος*, in Latin *turbo*, a shell anciently used for a trumpet. It is usually made of brass, sometimes of silver, iron, tin, and even wood. As to the invention of the trumpet, some Greek historians ascribe it to the Tyrrhenians; but others, with greater probability, to the Egyptians,



Egyptians; from whom it might have been transmitted to the Israelites. The trumpet of the jubilee is supposed to have been like our trumpets; widening gradually in a direct line to the orifice. See p. 348, 9.

The modern trumpet consists of a mouth-piece, near an inch broad, though the bottom be only one-third so much. The pieces which convey the wind, are called the *branches*; the two places where it is bent, *potences*; and the canal between the second bend and the extremity, the *pavilion*; the places where the branches take a funder, or are folded, the *knots*; which are five in number, and cover the joints. See fig. 7.

When the sound of the trumpet is well managed, it is of a great compass. Indeed its extent is not strictly determinable; since it reaches as high as the strength of the breath can force it. A good breath, we are told, will carry it beyond four octaves, which is the limit of some old organs and spinets; but its usual scale, noticing its imperfections, has been given in the preceding page. It does not play in so many different keys as the French horn; little pieces of metal are applied at the upper part of the tube to effect a change of key, or to enable it to sound certain notes; but these pieces perform very imperfectly the office of the crooks upon the French horn.

There are some performers who blow the trumpet so softly, and draw so delicate a sound from it, that it is used not only in church-music, but even in chamber-music; and it is on this account that, in the Italian and German music, we frequently find parts entitled *tromba prima*, first trumpet; *tromba, seconda, terza*, second, third, trumpet, &c. as being intended to be played with trumpets. The most celebrated trumpet-player of the last thirty years, beyond all competition for a dexterous management of the instrument, is Mr. Hyde: he is now declining in the vale of years; but is bringing forward his two sons, who bid fair to sustain the credit of his name.

The *trumpet-marine* is an instrument consisting of three sides, which form its triangular body. It has a very long neck, and one single string, very thick, mounted on a bridge, which is firm on one side, but tremulous on the other. It is struck by a bow with one hand, and with the other the string is pressed or stopped on the neck by the thumb. See fig. 8.

It is the trembling of the bridge, when struck, that makes it imitate the sound of a trumpet, which it does to that perfection, that it is scarcely possible to distinguish the one from the other. And this is what has given it the denomination of *trumpet-marine*, though, in propriety, it be a kind of monochord. Of the six divisions marked in the neck of the instrument; the first makes a fifth with the open chord, the second an octave, and so on for the rest, corresponding with the intervals of the military trumpet.

The trumpet-marine has the same defects with the real trumpet, viz. that it performs none but trumpet-notes, and some of those either too flat or too sharp. This Mr. Fr. Roberts accounts for, (Phil. Transf. 1692.) by premising the common observation of two unison-strings; that, if one be struck, the other will move: the impulses made on the air by one string setting another in motion, which lies in a disposition to have its vibrations synchronous to them; to which it may be added, that a string will move, not only at the striking of an unison, but also of that of an eighth or twelfth; there being no contrariety in the motions to hinder each other. Now in the trumpet-marine you do not stop close as in other instruments; but touch the string gently with your thumb, by which there is a mutual concurrence of the upper and lower part of the string to produce the sound. Hence it is concluded, that the trumpet-marine yields no musical sound but when the stop makes the upper part of the string an aliquot part of the remainder, and consequently of the whole; otherwise the vibrations of the parts will stop one another, and make a sound suitable to their motion, altogether confused. Now the aliquot parts, he shows, are the very stops which produce the trumpet-notes.

The *clarion* is a kind of trumpet, whose tube is narrower, and its tone shriller, than that of the common trumpet. It is said that the clarion, now used among the Moors, and by the Portuguese who borrowed it from them, served anciently as a treble to the common trumpet. The use of this is now supplied by the trombone, of which we are presently to speak.

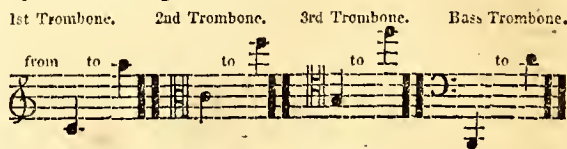
The **SACKBUT**.—The sackbut is an ancient instrument mentioned in Scripture. It is a kind of trumpet, though different from the common trumpet both in form and size. It takes a funder into four pieces, or branches; and has frequently a wreath in the middle; which is the same tube, only twisted twice, or making two circles in the middle of the instrument; by which means, it is brought down one-fourth lower than its natural tone. It has also two pieces or branches on the inside, which do not appear except when drawn out by means of an iron bar, and which lengthen it to the degree requisite to hit the tone required. The sackbut is usually eight feet long, without being drawn out, or without reckoning the circles. When extended to its full length, it is usually fifteen feet. The wreath is two feet nine inches in circumference.

The ancient instrument called the *sackbut* was discovered among the ruins of Herculaneum or Pompeii. The lower part is made of bronze, the upper part and the mouth-piece of solid gold. The king of Naples made a present of it to his present majesty, and from this antique the instruments now called *trombones* have been fashioned. In quality of tone, it has not been equalled by any of modern make.

*Trombone*, in Italian, signifies a "great trumpet," as *trombetta* denotes a little trumpet; both being derived from the generic *tromba*. The trombone, because its tube can be lengthened and shortened at pleasure, is called in Latin *tuba ductilis*.

Zarlini has described this instrument under the title of *trombone amovibile*, and the quantity and quality of the sounds it is capable of producing, very exactly. "The trombone (says he) is an instrument truly worthy of consideration, which I have seen and often heard by good performers, beginning at the lowest sound which it is capable of producing; when, being closed in all the joints, it can produce no sound less than the octave; then from the octave to the 5th; nor from that can it produce a less interval than the 4th; and from the 4th to the 3d major, then the 3d minor, after which another 4th, the key-note, from which it can form a complete series of eight notes. No other sounds than these can be produced without altering, moving, and lengthening, the instrument." *Supplementi Musicali*, lib. iii. cap. 5.

The trombones are much used in the large churches of Germany. They are usually made of brass; and are now of four different kinds, answering to treble, counter-tenor, tenor, and bass; but called first, second, third, and fourth. They produce all the tones and semitones; and the notation is the same as for the different voices, as will appear by the following scale.



The last, or bass trombone, is represented at fig. 9. It is often used alone, as a bass or double bass to other wind-instruments; and has the finest effect in funeral processions, and in general in melancholy strains. We never hear it with more pleasure in England than in Handel's Dead March in Saul. The tromboni and double drums, which were introduced in the abbey at the commemoration of Handel, to make a grand crash now-and-then, produced an admirable effect. Their use should be rare, and their effects would be more striking: but tromboni and double-drums are now so frequently used at the opera,



opera, oratorios, &c. that they are become a nuisance to lovers of pure harmony and refined tones: for, in fact, the vibrations of these instruments produce noise, not musical sounds; though, in certain peculiar situations, they have a noble and grand effect.

**INSTRUMENTS OF PERCUSSION** consist of drums, cymbals, triangles, carillons or bells, &c. but the only instruments of this kind now used in concerts are the kettle-drum and long double-drum.

Of the **KETTLE-DRUM** we have given a particular account under that article, vol. x. The drum is often used to mark, by a single note, the beginning of a bar, or to give force to a loud passage by a continual beating; but the finest effect produced by it is a roll during a pedale note in the bass, or a crescendo.

Every regiment of horse had formerly a pair of kettle-drums. The kettle-drummer rides always at the head of the squadron, and his post is on the right when the squadron is drawn up. The kettle-drum belonging to the royal regiment of artillery is mounted on a superb waggon, richly gilt and ornamented, and drawn by four white horses, elegantly caparisoned, with a seat for the drum-major general.

It is sometimes necessary to introduce the common drum and fife into orchestras, and particularly on the stage. The ordinary military *fide-drum* is made either of brass or of very thin board, turned round into a cylinder; in which form it is well secured by glue and rivets; and, further to strengthen it, is lined throughout with a strong kind of hempen cloth, or coarse Holland, cemented to its interior, so as to prevent the wood from splitting. The drum thus made will not, however, stand great heats or intense cold; nor will it in damp weather yield so full a tone as one with a brass barrel. Within each end of the barrel there is a flat wooden hoop firmly fixed, and projecting about the third of an inch beyond the brass or wood: these, which are called the *batten-boops*, serve to prevent the head from being cut by the edges. The head is made of parchment cut to a circular form, about two inches each way larger than the ends of the drum-barrel: it is fastened, while moist, to a small ring of copper, or of very firm tough wood, called the *flesh-hoop*, so as just to exceed the size of the band. The *head* properly means the parchment covering of that end which is beat upon: the other end, which is covered with a coarser parchment, is called the *reverse*. The head and the reverse, being applied to their respective ends of the barrel; over each a hoop, of about an inch and a half broad, and about the third of an inch in thickness, is drawn, to press the parchments close over the ends of the barrel, but not to pass over the flesh-hoops. The bracing-hoops, having holes made for passing a cord alternately from one to the other, backwards and forwards, are pulled down as near as possible towards each other, thereby to strain the head and reverse parchments very tight; but, as the cord is subject to relax, it is necessary to have sliders of very strong buff leather, called *braces*, which, being pressed downwards from the head hoop towards the reverse hoop, cause them to approach still nearer, and to tighten the two parchments to an extreme. When in this state, the drum is said to be "braced;" when otherwise, "unbraced." To give greater effect, and to cause that vibration which occasions a rough intonation, three pieces of thick catgut are stretched across the reverse, flat upon it, and parallel. When these, which are called "snare," are slackened, so as not to vibrate when the head is beat upon, the drum is said to be "damped," or "unsnares;" some, instead of slackening the snares, put a cloth between them and the reverse; whereby the sound is considerably deadened: this properly is termed "muffling;" though most persons consider that term to be appropriate only when the head is covered with crape, &c. as at funerals. After all the foregoing preparation, the drum would have little or no sound, were it not that a round hole, about the size of a large pea, is left in the centre of that side which is nearest

the body when the instrument is suspended by means of a sling passing over the right shoulder and under the left arm.

However simple the beats of the drum may appear, it is nevertheless by long practice only that perfection can be attained; and then requiring both a correct ear, and a very nimble wrist. Every beat is perfectly regular in the number and division of the strokes from the two sticks; of which that held by the right hand is slightly grasped, while that in the left hand is retained in an oblique position; passing between the middle and third fingers, and being held by the two first fingers and the thumb; the two lower fingers crossing under it, and the palm being turned upwards. Such is the established precision in which the drum-majors take great pride, that, if all the drummers of the British service were assembled together, they would be found to beat perfectly alike throughout what is called "the duty;" that is to say, all the beats in use; of which the following may be considered the principal.

The *roll*, which is a continued rolling sound, without the least inequality or intermission. This is produced by giving two taps with the same stick, using the different sticks alternately, each beating twice. The ordinary mode of teaching the roll is by the beat of "daddy-mammy;" so called from the double taps, in which each hand, after its two taps, is raised as high as the shoulder; thus forcing the pupil to strike distinctly and leisurely. By degrees he is able to beat quicker, and, ultimately, "to roll," in the manner above described, with such incredible celerity and evenness, as to produce a close and smooth sound.

The *swell* is nothing more than the roll occasionally beat so softly as scarce to be heard; then increasing to the utmost of the performer's strength; and again lowering so as almost to die away upon the ear: the great difficulty is to raise and to lower the sound very gradually. This beat is merely ornamental; it is usually performed in the *reveille*, &c. while the fifes are silent: it is quite arbitrary, being an *ad-libitum* performance.

The *flam* is a beat made by the two sticks striking almost at the same instant on the head, but so as to be heard separately: it is used as a signal for various motions and manœuvres.

The *ruffle* is a short roll; perhaps of five or six seconds' duration, beat very close and firm, decreasing a little in force just before it concludes, which it does in an abrupt and smart manner, and with a strong flam.

The *general* is an air, which, when performed at full length, is the signal for marching to some new ground, or to some other station: the first bar of its measure is beat as a signal for the firings to cease.

The *assembly*, or *assemblee*, is a signal for the line to fall in; and, when beat after the *general*, is followed by the *march*, which is beat by each corps as it moves from its ground.

The *march* is almost indefinite, but is ordinarily beat in compliment to a reviewing or a passing field-marshal, general, prince of the blood, &c. as also during salutes, when the battalion present their arms. We have the slow march and the quick march; but what are commonly called *marches*, and which have no particular distinguishing character, are usually performed in ordinary time.

The *reveille* is beat early in the morning, usually at day-break, to waken the garrison: it is a medley of various airs and beats. The *tattoo* is always beat at night, at such hour as the garrison should retire to rest; it is the signal for extinguishing fires and light, except in public guard-rooms. All soldiers found abroad after the tattoo is beat, are considered as trespassers against martial law. This also is a medley of airs and beats; the drums accompanying only at certain intervals.

The *retreat* is beat every evening at sun-set, or after a corps has been dismissed to their quarters: it is often beat in rather a quick time along the front of a corps, when paraded



paraded for inspection or roll-call. This beat likewise warns corps engaged in action, or performing evolutions, to retreat.

The *troop* is beat before the new guards, &c. about to march off from their place of assembly, to relieve others then on duty. This, as well as the retreat, is ordinalily in triple time of three crotchets or quavers; not unlike the waltz when performed rather slowly.

To *arms* is a beat resorted to on all emergencies, whether owing to disturbances, fire, invasion, &c.

There is a kind of *accompaniment* performed on the drum, when beating to marches, and to other airs played by a fife. This is called the *drag*; and is either double or single, according as the music may admit. The *single drag* is little more than a tap of the drum for each note in the air; the taps being given in exact time with the divisions of the music. This is what we commonly hear as an accompaniment to quick steps, "Rule Britannia," &c. The *double drag* is a much fuller accompaniment, in which, for the most part, two or three taps are given for every note in each bar; or, eventually, the whole is performed in a kind of articulate roll, not to be easily described, in which the accented parts are reinforced with much strength. But to say the most of the side-drum, its monotony soon tires the ear; its rattling sound becomes oppressive, and the little variety of its beats, in general not over-well executed, adds to the fatigue of listening, and produces something worse than indifference towards its sounds. This, however, is a doctrine by no means tolerated among drum-majors, who affect to produce infinite variations from what the vulgar call the *parchment fiddle*. They have a long train of "single reveillez," &c. which are intended to be performed without the fife, and are considered as concertantes among the sages in this branch of music: many pride themselves on the number of those solos, which, possibly, may have charms for their ears, though failing to fascinate ours.

The *Baj's Drum*, or *Turkish Drum*, is an instrument of the same construction as the side-drum above described; only it is on a very large scale, has no snare, is slung by the middle across the performer's body, and is beat upon at both ends; the right hand being furnished with a large stick, having a knob at its end; the left being provided either with a whisk or stick, whose knob is covered with buff leather, to soften the tone. The right hand beats the accented parts of the measure, the left filling up the time according to the performer's judgment. This instrument is of great service in military bands, giving a marked emphasis and a fine effect to the music, and proving an admirable guide to the corps while marching, so as to make them preserve a correct and regular pace.

The CYMBAL, as we have noticed at p. 350. was in use at a very early period; but whether the ancient cymbals were similar to ours is at least very doubtful. The derivation appears to be from the Greek *κymbalos*, cavity.

The ancient cymbal was of brass, like our kettle-drums; and, as some think, resembling them in their form, but smaller, and applied to a different use. Cassiodorus and Isidore call it *acetabulum*, the name of a cup or cavity of a bone wherein another is articulated; and Xenophon compares it to a horse's hoof; whence it must have been hollow; which appears, too, from the figure of several other things denominated from it: as a basin, cauldron, goblet, cask; and even a shoe, such as those of Empedocles, which were of brass. In reality, the ancient cymbals appear to have been very different from our kettle-drums, and their use of another kind: to their exterior cavity was fastened a handle; whence Pliny compares them to the upper part of the thigh, *cozendicibus*; and Rabanus to phials.

The Jews had their cymbals, which they called צלצלים; or, at least, instruments which the Greek, Latin, and English, translators render *cymbals*; for as to their matter, form, &c. the critics are wholly in the dark. Le Clerc has taken some pains to prove, that the *tzilzelim*, which

our version, after the Septuagint, renders cymbals, were only a couple of hollow demiglobes of brass, or some other tinkling metal, about six inches in diameter, which they used to shake one against another, like a pair of castanets, because we find some such instruments to have been in use among the ancients, and because the root *tzal-zal* often signifies to tinkle.

The cymbals of Bacchus were two small brass vessels, somewhat in the form of a shield, which being struck together by the hands, gave a sound. The well-known statue of the dancing fawn has one of these in each hand. An instrument of this kind is frequently to be seen in the Bacchanalian sacrifices or processions represented in ancient sculpture. It is still in general use in eastern countries; and has lately been introduced among the troops of almost all the princes of Europe, on account of its utility in marking the steps of the soldiers with force and precision during their march.

The *Triangle* is a little instrument of iron or steel, with sides, but open at one corner; and which serves as an accompaniment to other instruments in a military band, and in the streets: the performer supports it by a ring at the top with his left hand, and beats it with a small iron rod in his right hand. At the lowest angle iron rings are placed, which by their vibration augment the sound.

CARILLONS, or hand-bells, are sometimes used necessary in the accompaniment of certain airs; as "Let the merry bells ring round," in Milton's *Allegro*; and in the chorus of "Welcome, welcome, mighty king," in the oratorio of Saul. But an excellent and convenient imitation of hand-bells for this purpose is now produced by a small keyed instrument, played like a piano: the tones are produced by wooden hammers, which strike iron bars of different lengths. The *harmonica*, or musical glasses, are likewise now inclosed in a box, and played with keys in the same manner.

It may not be amiss just to notice a species of carillons, or chimes, frequent in the Low Countries, particularly at Ghent and Antwerp, and played on a number of bells in a belfry, forming a complete series, or scale, of tones and semitones, like those on the harpsichord and organ. There are pedals communicating with the great bells, upon which the *carillonneur* with his feet plays the bass to sprightly airs performed with the two hands upon the upper species of keys. These keys are projecting sticks, wide enough asunder to be struck with violence and velocity by either of the hands edgeways, without the danger of hitting the neighbouring key. The player is provided with a thick leather covering for the little finger of each hand, to guard against the violence of the stroke. These carillons are heard through a large town. Of bell-ringing in general, we have spoken sufficiently under the word *BELL*, vol. ii. and of musical chimes, as applied to clocks, with the method of pricking the chime-barrel, see the article *HOROLOGY*, vol. x. p. 330-332. and Plate X.

#### OF MEASURING TIME.

The following are the words in common use, as prefixed to pieces of music, to denote the *time* they are to be performed in:

<i>Adagio</i> .....	The slowest time.
<i>Grave</i> .....	Very slow.
<i>Largo</i> .....	Slow.
<i>Larghetto</i> .....	Rather less slow than Largo.
<i>Andante</i> .....	In a marked and distinct manner.
<i>Andantino</i> .....	In a flowing style.
<i>Majestic</i> .....	Majestically.
<i>Allegro</i> .....	Quick.
<i>Allegretto</i> .....	Not so quick as Allegro.
<i>Vivace</i> .....	Lively.
<i>Presto</i> .....	Very quick.
<i>Prestissimo</i> .....	As quick as possible.

There are several other terms which often occur at the beginning of different movements; such as *Canabile*, *Pastorale*,



*Pastorale, Gracioso, &c. &c.* but these rather apply to the style and manner of playing than to the time. Even the terms we have here retained are very indefinite; since, though the proportions may be correct, yet the actual degree of velocity is yet a matter of doubt, and can only be decided by the composer himself.

But even the proportions are not to be absolutely depended upon; for the order in which the above terms should be placed is much disputed. Some put *Adagio* in the second degree, (after *Grave*;) others in the fourth, (after *Larghetto*.) In Rousseau's Dictionary of Music, time is divided into five principal terms, in the following order: *Largo, Adagio, Andante, Allegro, and Presto*. There are also other collateral terms; and there are also various modifications of these, by the addition of the words *molto, poco, non troppo, &c.* and by combinations, as *andante allegro, andante larghetto, &c.* These terms are, perhaps, only intelligible when considered in succession. Slow and quick, like great and small, exist only by comparison.

It is not surprising that composers should be misunderstood, since we find they are themselves inconsistent. Handel has marked the bass air in the Messiah, "But who may abide," with the word *Larghetto*; but he has marked the same song *Andante larghetto* in the appendix. The recitative "For behold, darkness shall cover the earth," is marked *Andante larghetto*, and the succeeding air, *Larghetto*. Now *larghetto* is certainly slower than *andante larghetto*, yet the quavers in the air are always performed full as quick as the semiquavers in the recitative. The air, "Thou art gone up on high," for a soprano voice, is marked *Andante*; the same song, with the slightest variation, for a bass voice, is marked *Allegro*. In old, and especially church, music, where the notes of the shortest value were quavers, and those but seldom used, the minims were no longer than our crotchets. Pleyel, and some others of the later composers, seem to have revived this long-neglected species of notation, in the *prestos* and other quick movements of their sinfonias. Indeed time frequently seems to depend on the number of notes contained in a bar.

Dr. Nares, in the preface to his Anthems, remarks, that "music performed in just time is like a painting set in a good light;" and he is therefore anxious that the terms of time should be particularly regarded. We partake in the good doctor's anxiety; but before the "terms of time" can be properly "regarded," they must first have a definite meaning, a correct character, expressive of the absolute duration of each note. This is the object of our present enquiry.

It has been remarked, in an excellent "Essay on Music," printed in the British Magazine, (Oct. 1800.) that it would be easy to prefix to each movement a number, signifying how many bars are to be performed in a minute, which might at first be ascertained by the help of a stop-watch, and would soon become perfectly familiar both to composers and performers, even without this assistance. According to Quantz, the number which should be substituted for *Allegro assai*, in common time, is about 40; for *Allegretto*, 20; for *Larghetto*, 10; and for *Adagio assai*, 5. But it is usual to perform modern music much more rapidly than this; or at least the style of composition is so changed, that the terms are very differently applied. An allegro, or even an allegretto, in common time, without semiquavers, is often performed as fast as 60; seldom slower than 30."

The idea, however, of a musical chronometer, is not new, though it has not been brought into successful practice till very recently. But it is necessary that we should speak of successive as well as successful inventions. M. Loulie, a French musician, invented a machine for the purpose of measuring time by means of a pendulum. The form of the instrument is that of an Ionic pilaster, and is thus described by Malcolm in his Treatise of Music, published in 1721. "The chronometer consists of a large

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ruler or board, six feet or 72 inches long, to be set on end; it is divided into its inches, and the numbers set so as to count upwards; and at every division there is a small round hole through whose centre the line of division runs. At the top of this ruler, about an inch above the division 72, and perpendicular to the ruler, is inserted a small piece of wood, in the upper side of which there is a groove, hollowed along from the end that stands out to that which is fixed in the ruler, and near each end of it a hole is made: through these holes a pendulum-cord is drawn, which runs in the groove: at that end of the cord which comes through the hole furthest from the ruler, the ball is hung; and at the other end there is a small wooden pin, which can be put in any of the holes of the ruler. When the pin is in the uppermost hole at 72, then the pendulum from the top to the centre of the ball must be exactly 72 inches; and therefore, whatever hole of the ruler it is put in, the pendulum will be just so many inches as that figure at the hole denotes. The manner of using the machine is this: The composer lengthens or shortens his pendulum, till one vibration be equal to the designed length of his bar, and then the pin stands at a certain division, which marks the length of the pendulum; and this number being set with the clef at the beginning of the song, is a direction for others how to use the chronometer in measuring the time according to the composer's design: for with the number is set the note, crotchet or minim, whose value he would have the vibration to be; which in brisk duple (common) time is best a minim, or half-bar; or even a whole bar, when that is but a minim; and in slow time a crotchet. In triple time, it would do well to be the third part, or half, or fourth part, of a bar; and, in the simple triples that are allegro, let it be a whole bar. And if, in every time that is allegro, the vibration is applied to a whole or half bar, practice will teach us to subdivide it justly and equally. Observe, that to make this machine of universal use, some canonical measure of the divisions must be agreed upon, that the figure may give a certain direction for the length of the pendulum." This, we think, must have been an unwieldy, complex, and expensive instrument.

Another chronometer, invented by M. Sauveur, is described in his "Principles of Acoustics." It was a pendulum of a particular kind, which he exclusively applied to ascertain the time in the performance of musical compositions. L'Affilard, in his "Principles dedicated to Religious Ladies," placed at the head of all his airs figures which expressed the number of vibrations of the pendulum during the performance of each bar.

Rousseau said, in his Dictionary, forty years ago, that it was then thirty years since a similar instrument appeared under the title of chronometer, which beat the time itself; but none of them had succeeded. "Many, however, (continues Rousseau,) have asserted, that it is very much to be wished that such an instrument was completed in order to fix with precision the time of each bar in a piece of music; as, by that means, the true original measure of each composition would be recorded, without which expedient, it loses its character; and, after the death of the author, it is only by a kind of tradition, very likely to vary and be lost, that the time is known. Old people already complain that the time of many airs is lost; and it is believed that they are performed too slow. This may have come on by degrees, from the characters in present use, which look much quicker than those of a hundred, or indeed of fifty, years ago, when demi-semiquavers were seldom used; and, where there are now only minims, there used to be semibreves, as in *alla breve* time." We are certain, from our own memory, that the time of Handel's music is often mistaken, and performed sometimes quicker and sometimes slower than when under his own direction; but mostly quicker.

The objections of Mons. Didcot to the use of a chronometer are by no means insurmountable; and some of them are ingeniously answered by Rousseau. But one of

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them



them is very curious: he remarks, that "in a movement there are, perhaps, not two bars of the same duration!" Happily, however, we have no such music; it never existed out of France; and is at length banished its only asylum. But we will detain the reader no longer from an acquaintance with those instruments by the invention and successive improvement of which, that which has been so long a *defideratum* is at length discovered; namely, a true time-measurer, by the use of which the composer's intentions as to the velocity of his music may at once be known, and can never be lost.

A very few years ago, two or three composers of acknowledged abilities, particularly Mr. G. Lanza and Dr. Crotch, began to adopt (or rather to revive) the use of a pendulum to regulate the time of their compositions, and to mark the length of the pendulum at the head of their pieces as a direction to the player. From the hints furnished by these distinguished professors, Mr. Ackermann has contrived two very simple but useful instruments, which we shall now proceed to describe.

To such musical students as are acquainted with the rudiments of natural philosophy, it will be needless to observe, that the velocity of the vibrations of a pendulum depends solely upon its length; and that no force, however strong, nor the greater or less weight of the ball, is capable of accelerating or retarding those vibrations. An increased impulse will make the ball swing through a more extended range, but it will return to its original place exactly in the same time as it would have done if moved by the slightest touch of the finger. It is owing to this isochronous property of the pendulum, that it has been applied to the regulation of clocks, &c. Having premised thus much, the instrument itself will easily be understood. Fig. 10. represents a brass ball affixed to a silken string, correctly divided into inches and half-inches (beginning from the centre of the ball). The length prescribed, at the outset of each movement, for any note of a certain value, such as a crotchet, quaver, or semiquaver, is taken on the string, and thus much of it held out by the hand, or fastened to some place within view of the performer; it is then set in motion, and *each distinct vibration* will indicate the quickness of the time required. This little instrument is by Ackermann called a *Regulator*; and is sold, fitted up in a box, for the trifling sum of one shilling. Its simplicity is its highest recommendation. The only inconvenience it presented on trial was, that it required either a person to hold it suspended while the other was playing to it, or that a convenient place within view of the performer, to fasten it to, could not at all times be devised.

These objections are effectually removed by the *Balance-Regulator*, fig. 11. brought to its present state of perfection after several alterations and improvements. The pendular ball is nicely balanced by another ball of equal weight, fastened to the other end of the string, and sliding up and down a square brass rod, upon the sides of which inches (from 1 to 11), as well as half and quarter inches, are marked in the metal. When required to be used, the lower extremity of the rod is stuck into the cover of the little box in which the whole apparatus is contained, and the box placed near the performer, on the pianoforte itself; or, if thought proper, a neat hole may be contrived on one of the sides of the pianoforte, to insert the rod in. When fixed, the *upper end* of the ball is shifted to such a number of inches as stands marked at the beginning of each movement; and, when set in motion, it will vibrate the note required, (crotchet, quaver, or semiquaver;) care being taken not to relax the string in lifting or pushing the ball, lest the balancing-ball slip from its mark. To render the balance-regulator as portable as possible, and capable of being carried in the pocket, the length of the rod and string has been limited to eleven inches, it having, by repeated trials, been ascertained, that even the slowest movements may be marked by that length, if not in quavers, at all events in semiquavers.

As, however, some music has already issued, and may hereafter issue, in which the length of the pendulum exceeds eleven inches, it remains to be shown how this instrument may be used for any possible pendular signatures. The simple rule, founded on the theory of pendulums, is this: Whenever the signature exceeds eleven inches, set the balance-regulator to the fourth part of such signature, and it will swing a note as quick again as the one for which that signature was intended. For instance, suppose the signature prescribed a length of 20 inches for crotchets, in that case 5 inches taken on the regulator will swing quavers; or again, were the signature 13 inches for quavers,  $3\frac{1}{4}$  inches on the regulator would swing semiquavers, &c.

As hitherto very few musical works have been published with a pendular notation of the time, it was conceived that no small service would be rendered to the musical student by presenting him with a general scale of the time in which every species of movement, from the *Largo* to the *Prestissimo*, may, with propriety and effect, be executed by means of the pendulum. This scale will therefore be found in a brief catalogue in the box. As it has been laid down by a professor of the first-rate eminence, it will be found as correct as the nature of a general rule would admit of; particularly when it is considered, that the opinions of the greatest composers have not unfrequently been found at variance as to the time to be assigned to particular movements; and that, consequently, a degree of latitude is left in this respect to the taste and judgment of the performer. In framing this scale, Clementi's "Introduction to the Art of Playing on the Pianoforte" has been taken as the basis; and those signatures only have been noticed which appeared directly to influence the time of the movement, omitting such as seemed rather intended to illustrate the character of the piece, which must likewise be left to the taste and conception of the player.

It is probably also needless to add, that the regulator of either kind is by no means intended to vibrate from the beginning to the end of a movement; but merely to indicate its time for a number of bars, sufficient to impress the performer with a correct idea of the time required; and as such it will be found to keep its motion much longer than necessary.

Mr. Ackermann concludes his description and recommendation of these machines with an assertion which startled us, and made us almost repent of having undertaken to advocate the use of time-measurers at all. His words are these: "To play a whole piece *strictly in time*, has, however paradoxical the assertion may appear, upon a late trial purposely instituted for the sake of experiment, been found to be attended with no good effect. The music, by the punctual observance of time, became divested of its spirit, and highly insipid. Something, therefore, it seems, must even here be left to the taste and discrimination of the performer; and a regulator mechanically contrived, so as to remain in motion throughout the piece, would answer no desirable purpose."

Smart's Musical Chronometer is represented at fig. 12. It is the invention of Mr. Henry Smart, leader of the orchestra at Drury-lane theatre. It is about sixteen inches wide and fourteen high; it forms a most commodious double or single music-desk, either for the pianoforte or the table. Immediately under the book-rest or ledge, is a row of eight little hammers beating upon a tablet, on which is engraven a staff of music, divided into eight bars or compartments, containing the gradation of notes from the semibreve to the demisemiquaver, including the triplets. On each side is a dial with a hand or index: that on the left contains the signs of the six times, or measures, most commonly in use; i. e.  $\text{C} \quad \frac{3}{4} \quad \frac{2}{4} \quad \frac{1}{2} \quad \frac{1}{4} \quad \frac{1}{8}$ . The right-hand dial is divided into 60 degrees, by which the time may be accelerated or retarded to the greatest nicety. The whole is put in motion by internal machinery,



chinery, and, when wound up, will continue in action for an hour; by turning the index of the left dial, the chronometer is adjusted to any measure required, whilst in the same action the tablet shifts itself, and shows the gradation of notes in the required measure; and each hammer beats the exact time of the notes over which it acts. To prevent the confusion that might arise from the action of all the hammers at the same time, there is a little stud under each to restrain their motion, so that any hammer may be stopped at pleasure by merely slipping back the corresponding stud. The management of this instrument is very simple; but ample instructions for the use of it will be found in a little work published in 1815, by the inventor, entitled "An Introduction to the Musical Chronometer, forming a Selection of Airs, &c. from the most classical Authors;" in the course of which, the application and management of the machine are progressively explained. The inventor says, "The clearness with which this machine demonstrates the principles of time renders it a most important acquisition in the study of music, particularly in the master's absence, as pupils have constant instruction before them in the hours of private practice, when, if necessary, they may ascertain the true time of every note they have to play."

Maelzel's *Metronome*, or Musical Time-keeper, is the machine most recently invented, and which has already obtained the greatest reputation. We shall therefore describe it at length from the specification to the patent.

The object of this invention is two-fold: 1st. It affords to the composers of every country the means of indicating, in a simple and decisive manner, the degree of quickness with which their works are to be executed. 2dly. It accustoms the young practitioner to a correct observance of time, which it heats with unerring precision, and according to any velocity required, during the whole performance.

The metronome consists of a portable little obelisk, or pyramid, scarcely a foot high, the decorated exterior of which renders it an ornamental piece of furniture. Its interior contains a simple mechanical apparatus, with a scale resembling that of a thermometer. According to what number on this scale the index is set to, the audible beats produced will be found to embrace the whole gradation of musical time, from the lowest *Adagio* to the quickest *Presto*. The metronomic scale is not borrowed from the measures of length peculiar to any one country, but is founded on the division of time into minutes. The minute being thus, as it were, the element of the metronomic scale, its divisions are thereby rendered intelligible and applicable in every country. An universal standard-measure for musical time is thus obtained, and its correctness may be proved at all times by comparison with a stop-watch.

At the top of the obelisk is a small lid, with a hinge to its back. On lifting this lid, the upper part of the front of the obelisk is pushed forward by a spring, so as to enable its being taken out and put aside; at the same time the steel pendulum, together with the scale behind it, will likewise fly forward into a perpendicular direction, and a small key be found under the upper lid. This key fits a hole contrived about the middle of one of the sides of the obelisk, and with it the clock-work is wound up and the pendulum made to move. Its motion may be stopped at pleasure by a small brass bolt fixed to the top. These preparations made, the directions to be given for using the instrument may be classed under two heads.

A sliding weight is attached to the rod, or steel pendulum: the higher up this weight is shifted, the slower will be the vibrations, and *vice versa*: so that, when the weight corresponds with the number 50, the vibrations will be the slowest possible; at 160 they will be the quickest. These numbers have all reference to a *minute of time*: viz. when the weight is placed at 50, fifty beats, or ticks, will be obtained in each minute; when at 60, sixty beats in a minute (i. e. seconds precisely); when at 100, one hundred

beats in a minute: any stop-watch, therefore, will show how far the correctness of the metronome may be depended on. The doubles of the numbers on the scale answer to a precisely double degree of velocity: thus, if 50 be the proper number for a minim, 100 is the number for the crotchets in the same movement; if 60 serves for crotchets, 120 expresses the quavers in the same movement, &c.

The composer is best able to judge, from the nature of his movement, whether to mark its time by minims, crotchets, quavers, &c. Generally speaking, it will be found, that in *Adagios* it is most convenient to mark the time on the metronome by quavers, in *Andantes* by crotchets, in *Allegros* by minims, and in *Prestos* by whole bars. As often, however, as the case may admit of so doing, it is desirable that the pendulum should be made to strike integral parts of a bar, just as a master would beat or count the time; i. e. in  $\frac{1}{2}$ ,  $\frac{2}{3}$ , and  $\frac{3}{4}$  time, the rod should, whenever possible, beat  $\frac{1}{2}$ , or one crotchet. In  $\frac{2}{3}$  and  $\frac{3}{4}$  time, the rod should, whenever possible, beat  $\frac{1}{3}$ , or one quaver: This being premised, suppose a composer desires to time a movement in  $\frac{3}{4}$  time, which, according to the present system, would he called an *Allegro*; let the weight, by way of trial, be placed against N<sup>o</sup> 80., and two or three bars of the movement be played, to ascertain whether, at that number, each beat falls in with the degree of quickness desired for one minim or two crotchets. If it beat too slowly, shift the weight downwards, until, by two or three trials, a place (suppose at 84.) has been found for the weight, at which the pendulum beats the minim in the precise degree of quickness contemplated for the due performance of the movement: it being well understood, that in this, as in every other, case, "each single beat, or tick, forms a part of the intended time, and is to be counted as such; but not the two beats produced by the motion from one side to the other." At fig. 13, this machine is represented open and in action: *a* is the scale of numbers designating the time; *b*, the inverted pendulum, with its weight, or regulator; *c*, *e*, other lengths of the pendulum, or heights of the weight; *d*, the mahogany-box containing the wheel-work.

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